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ABSTRACT

This manual presents detailed instructions for delivering health care services to students with special health needs within the school setting. Individual chapters address the following areas: dressing; vital signs; height and weight; fluids/nourishment; medications; oxygen and use of the respirator/ventilator; suctioning; respiratory therapy; urinary tract care; bowel and bladder care; applying dressings; use of warm and cool applications; personal hygiene; decubitus ulcers; positioning; exercises; ambulation; casts, braces, and prostheses (observation, alignment, functioning); intake/output; specimen collection; specimen testing; care of equipment; and charting. Information provided for each area includes indication of school personnel who can appropriately provide the care, training needs, and procedures (usually including purpose, equipment, general principles, precautions, and specific steps). Appendixes provide: a listing of technical skills needed to meet health care needs by area; criteria and competencies of persons providing health services; and instructions for handwashing and handling body fluids. (DB)

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PROCEDURE GUIDELINES FOR HEALTH CARE OF SPECIAL NEEDS STUDENTS IN THE SCHOOL SETTING

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COLORADO DEPARTMENT of EDUCATION
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1988

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A grant was obtained from the Colorado Department of Education - Special Education Services Unit to develop these Procedure Guidelines for Health Care of Special Needs Students in the School Setting. The twenty-three chapters of these guidelines correspond to the twenty-three categories listed in the "Technical Skills Chart" with directions on how the care might be provided in the school setting. Elizabeth Viele was contracted through the grant to write the procedures for this manual. Elizabeth is an experienced school nurse, school nurse supervisor, and community health nurse with a pediatric focus. The procedures were adapted to the school setting from those written for institutions and home health care. The Procedure Guidelines were then printed by the Colorado Department of Health - Community Nursing Section.

These Procedure Guidelines are intended as a model. Local autonomy, professional personnel (both educational and health), and the availability of resources will influence the way these guidelines can be adapted for local use. You are urged to carefully review and consider these guidelines in planning school health services for students with special health care needs.

The school registered nurse is usually assigned to a generalized school health program in which many students are neither acutely nor chronically ill or disabled. Those generalized school health services are not addressed in these guidelines but are written in the Colorado School Health Guidelines, second edition, which is available from the Colorado Department of Health - Community Nursing Section.

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INTRODUCTION

Students who were formerly institutionalized for care and education are now receiving their education and health care during the class hours in the public school setting. This was mandated by the Federal PL 94-142 - Education of the Handicapped Act. The advanced technology of medicine has led to survival of children who in the past would have succumbed to their illness. Early dismissal from hospitals has become routine, allowing students to return home and to school while they are receiving treatment. Special procedures such as suctioning tracheostomies, catheterizations and others are now being requested in the schools - an educational setting, not a medical setting.

Quality health care fosters the best interest and safety of the student and supports an optimal educational experience. This health care is best provided in the school through assessment, planning, and monitoring by the family physician and the school registered nurse. As most school districts do not have a school registered nurse full time in every building there may be concerns for students' well being and for district liability. However, most school districts do have access to a school registered nurse or public health nurse, and all districts have access to the family physician, to participate in planning care.

The registered nurse's delegation to and supervision of non-licensed personnel assisting with students' health care is another major concern. The type of delegation and supervision that can be provided is individually controlled in each state by the State Board of Nursing and the State Medical Practice Act.
As noted in these Procedure Guidelines, the licensed physician must furnish directions to such non-licensed care personnel that specify exactly what health services are to be provided under the circumstances of each case.

It is essential to have a "Health Care Action Plan" for students with special needs. This is for the protection of the student as well as for the school personnel. It provides for effective and efficient strategy. The development of the "Health Care Action Plan" should include the school administrator and/or designee, the parent, the student (if appropriate), the school nurse, and the student's physician. Guidelines and forms to develop a "Health Care Action Plan" can be found on pages 254-263 in Chapter 23 on Charting.

The Technical Skill Chart found in Appendix A has been developed to assist school districts to clarify the roles of the school registered nurse and other school personnel directly involved in providing the requested health care in the school setting. Legal, ethical, and moral issues were considered as the chart was being developed.

The Appendix also includes some important information to review before developing the "Health Care Action Plan". You will find:

- Criteria and Competencies of Persons Providing Health Services in Schools
- Handwashing Procedures
- Protocols for Handling Body Fluids in the School Setting

ACKNOWLEDGEMENTS

The initial document, Health Care Of Special Needs Students In The School Setting, including the "Technical Skills To Meet The Health Care Needs and Services For Students In the School Setting" and "Criteria And Competencies Of Persons Providing Health Services In Schools", was developed, nurtured, edited and revised by the following nurses:

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Mary Miller, RN, MS, Coordinator - School Health Program, The Children's Hospital - Denver

This document was also reviewed by the following groups of people who have an interest in safely serving students with special health care needs:

Colorado Association of Retarded Citizens
The Children's Hospital - School Health Services
Colorado Board of Nursing - Program Administrator
Colorado Department of Education - Special Education Services Unit
Colorado Department of Health - Community Nursing Section
Colorado Medical Society - School Health Committee
Legal Rights Center for Disabled Persons
School Nurse Supervisors/Coordinators in Colorado
and a sample of school registered nurses and special education directors in rural and urban Colorado.

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PROCEDURE GUIDELINES FOR HEALTH CARE OF SPECIAL NEEDS STUDENTS IN THE SCHOOL SETTING

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ASSIST WITH CLOTHING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by school registered nurse.

REMARKS:
Student and parent can inform school personnel of procedure being used at home.

Appendix A

PROCEDURE

Purpose: To assist and support the student in managing his clothing and to help him toward independence in activities of daily living.

Equipment: Clothing that is clean, dry, not restrictive, comfortable, soft to the skin, appropriate to climate and season, safe, attractive, simple in design, easy to care for, practical and appropriate for student's condition.
Dressing Tools: recommended tools may include a reacher, long handled shoe horn, elastic shoelaces, button aid, dressing stick, mirror.

General principles:
Dress the weak or most involved extremity first.
Undress the weak or involved extremity last.
Select appropriate garments.
Techniques may depend on the extent the student can move, the type of garment used, and the condition of the student.
Lay out clothing where student can reach it in the order he will use it.
Position student in front of a mirror to help him monitor his progress.
Put suggested/prescribed dressing tools near the clothing.
Allow enough time.
Follow the same routine each time the student dresses or undresses.

Developmental readiness:
A student is ready to learn how to undress and dress when he is able to:
  sit up and maintain balance (or function while lying on his side)
  help feed himself

Developmental readiness (cont.):

follow directions
show which articles of clothing are worn on which parts of the body
move his arms from side to side and over his head
imitate another person's motions
grasp objects with his hands.

Protocols on the following pages are from the National HomeCaring Council Division of the Foundation for Hospice and Homecare's A Better Answer...A Handbook for Homemaker-Home Health Aides Working with Persons with Developmental Disabilities and Their Families.

Directions To The Student For Garments That
PULL OVER THE HEAD (undershirt, T-shirt, dress, sweater).

To Undress

DUCK-THE-HEAD METHOD

Grasp the back of the neck hole with one or both hands.
Duck your head and pull it out of the hole.
With your right hand, hold the bottom of the left sleeve and pull the sleeve off your arm.
With your left hand, pull or shake the other sleeve off.

ARMS-OUT-FIRST METHOD

Short Sleeves

Grasp the left sleeve with your right hand and pull it down over your elbow as you pull your left arm out of the armhole.

Pull your right arm out of the right sleeve in the same way.
Pull the shirt over your head.

To Dress

DUCK-THE-HEAD METHOD

Grasp the back of the T-shirt at the bottom.
Duck your head and pull the T-shirt over your head.
Find the left armhole and put your left hand through it.
Do the same with the right armhole.
Hold the bottom of the shirt and pull it down over your body.

ARMS-IN-FIRST METHOD

Short or Long Sleeves

Lay the shirt flat on your lap (or on a table or bed) front side down.
Open the bottom edge with your right hand.

Push your left arm into the left sleeve and pull the sleeve up over your elbow with you right hand.
Repeat for the right sleeve.
Grasp the back of the shirt with your right hand and pull it over your head.
Lastly, pull it down over your body.

To Undress

ARMS-OUT-FIRST METHOD (cont.)

Long Sleeves

Raise your left arm so that it is even with your shoulder.
Bend your elbow and grasp the left cuff with your right hand.
Pull down on the sleeve with your right hand.
Keep pulling down on the sleeve as you pull your left arm out.
Repeat for the other sleeve.
Pull the shirt over your head.

end

To Dress

end

Directions To The Student For Garments That
OPEN DOWN THE FRONT (coats, jackets, button shirts/sweaters)

To Undress

FLIP-OVER METHOD

Lean forward and duck your head.
Grasp the jacket at the back of the neck with both hands and pull it forward over your head.
The jacket is now in front.
Pull the sleeves off your arms.

ARMS-IN-FRONT METHOD

Pull the jacket off one shoulder.
Pull the sleeve down while you pull your arm out of the sleeve.
Pull the jacket around to the front.
Pull off the other sleeve.

ARMS-IN-BACK METHOD

Put both hands behind your back.
Pull one sleeve off.
Put both arms in front of you and pull the other sleeve off.

end

To Dress

FLIP-OVER METHOD

Lay the jacket flat on your lap or on a table so that the collar is toward you and the buttons show.
Push your arms into the sleeves.
Grasp the bottom of the jacket with both hands and raise your arms over your head.
Duck your head and pull the jacket over it.
Pull the jacket down over your body.

PULL-FROM-FRONT METHOD

Grasp the jacket by the collar and pull the left sleeve on.
Grasp the right shoulder of the jacket with your other hand and pull it around behind your head to your left shoulder.
Grasp the right shoulder with your left hand, find the armhole, and push your right arm into the sleeve.

end

Directions To The Student For Garments
WORN ON THE LOWER BODY (jeans, shorts, skirts, underpants, slacks).

To Undress

LYING-DOWN METHOD

Lie down on the floor or bed.
Pull the pants down over your hips while rolling from side to side or arching your back.
Wiggle around while you push the pants to your feet.
Kick the pants off your feet.

SITTING-UP METHOD

Sit on a chair:
Brace your feet and, with one arm, lift your hips off the chair.
Push the pants down over your hips.
Lean forward, grasp the cuffs, and pull or kick the pants off your feet.

Sit on a mat or bed:
Push the pants down over your hips while wiggling you body or rolling from side to side.
Bend your knees, grasp the cuffs and pull the pants off, or cross your legs and pull them off one cuff at a time.

KNEELING METHOD

Kneel on the floor, mat or bed.
Pull the pants down over your hips.
Sit down and finish taking them off using one of the sitting methods.

STANDING METHOD

Hold on to a chair with one hand or lean against the wall.
Push your pants down over your knees with the other hand (or both hands).
Step out of them or sit down and pull them off.

end

To Dress

LYING-DOWN METHOD

Lie down and put your feet into the pants legs.
Pull the pants up over your hips with both hands while you roll from side to side or arch your back.

SITTING-UP METHOD

Sit on a chair:
Hold the pants open and put your feet into the pants legs.
Pull the pants up over your knees.
Lift your body off the chair with one hand.
Pull the pants up over your hips with the other hand.

Sit on a mat or bed:
Cross one leg over the other knee and put your foot into the pants leg.
Or pick up one leg, bend your knee, and put your foot into the pants leg.
Repeat with other foot and leg.
Pull the pants up over your knees.
Pull them up over your hips while wiggling forward or rolling side to side.

KNEELING METHOD

Sit on the floor, mat or bed.
Hold the pants open and put your feet into the pants lets.
Pull the pants up over your knees.
Kneel down and pull them up over your hips.

STANDING METHOD

Sit on a chair.
Put your feet into the pants legs.
Stand up and hold on to the chair with one hand (or lean against the wall).
Pull the pants up over your hips.

end

Directions To The Student For SOCKS.

To Undress

RUB METHOD
Push the sock way down with your hands or by rubbing it on the mat.
Grasp the toe of the sock and pull the sock off.

HOOK-AND-PULL METHOD
Hook your thumb or fingers into the back of the sock above the heel.
Pull the sock down over your heel.
Grasp the toe of the sock and pull the sock off.

end

To Dress

FOLD-IN-HALF METHOD
Fold upper part of sock at the heel so it looks like a scuff slipper.
Grasp the sides of the sock.
Put your toes in and pull the sock over your foot.
Hold the folded part and pull it up over your heel and up your leg.

end

Directions To The Student For SHOES

To Undress

Ask for help to loosen or unlace shoelaces if needed.

BOOTJACK METHOD
Wedge shoe into bootjack.
Pull foot out of the shoe.

RUB METHOD
Point you toes up.
Rub the back of your shoe against the mat, footstool or toe of the other shoe.

PUSH-PULL METHOD
Put one foot on you other knee.
Pull up on the toe of your shoe with one hand and pull the heel down with the other hand.
This can also be done without crossing your legs.

end

To Dress

Ask for help to tie shoelaces if needed.

BOX METHOD
Have the shoe placed in a box in front of you.
Point you toes, and put your foot into the shoe.
Push your foot forward and down.

SHOEHORN METHOD
Put the shoehorn into the back of your shoe.
Put your toes in the shoe.
Push down and forward while you pull out the shoehorn.

PUSH METHOD
Put one foot on your other knee or lift up your foot.
Hold the top of your shoe open with both hands. Point your toes.
Push your toes into the shoe while pushing up on the bottom of the shoe with one hand.

end

REFERENCES for Chapter 1. DRESSING:

Gilbertson, Esther et al. A Better Answer...A Handbook for Homemaker-Home Health Aides Working with Persons with Developmental Disabilities and Their Families. Washington: National HomeCaring Council Division of the Foundation for Hospice and Homecare, 1981.*

Zucker, Elana D., ed. Being A Homemaker/Home Health Aide. Bowie, MD: Robert J. Brady Co., Prentice-Hall Publishing, 1982.

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*A Better Answer...A Handbook for Homemaker-Home Health Aides Working with Persons with Developmental Disabilities and Their Families is available for purchase from The Foundation for Hospice and Homecare at 519 C Street, N.E., Stanton Park, Washington, D.C. 20002. (202)547-6586.

TEMPERATURE, PULSE, RESPIRATION, BLOOD PRESSURE

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
To be determined by the school registered nurse

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Monitoring vital signs will not usually be delegated by the school registered nurse when there is evidence of fluctuating or abnormal temperature, pulse, respiration or blood pressure; or when blood pressure or pulse is to be taken before or after medication or treatment.

REMARKS:
Appropriate equipment must be available.

Appendix A

TEMPERATURE

Definition: Body temperature is a measurement of the amount of heat in the body. It is the difference between the heat produced and the heat lost.

Purpose: To determine if the student has a fever, and to what degree the temperature is elevated above his normal temperature.

Equipment: Glass thermometer (oral or rectal) or electronic thermometer, disposable thermometer sheath (optional), cotton ball, gauze or paper towel, soap and water, germicide solution and storage container, disposable gloves, waste container.

Precautions: The use of glass thermometers may be ill-advised with some special needs students; **electronic thermometers are recommended.**
Rectal temperatures will frequently be **contraindicated** for students with certain cardiac and neurologic conditions, and those with diarrhea; follow student's health care action plan.
Routine use of disposable gloves for taking temperatures is not necessary; follow the guidelines in Appendix C. Handling Body Fluids.

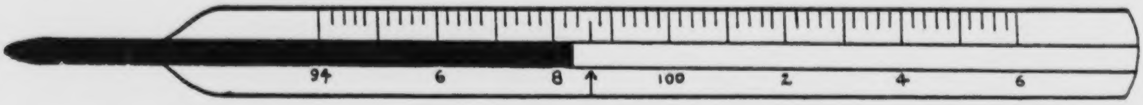
Normal Temperature Range in Children

	Fahrenheit	Centigrade	Minutes Taken (glass thermometer)
Oral [O]	97.6°F to 99.3°F	36.4°C to 37.4°C	6 - 9 min.
Rectal [R]	97.0°F to 100.0°F	36.2°C to 37.8°C	3 - 5 min.
Axillary [A]	96.6°F to 98.9°F	35.9°C to 36.7°C	9 -11 min.

MEASURING AN ORAL TEMPERATURE:

Steps	Notes
Determine the need to measure the student's oral temperature at school.	Refer to the physician's orders and the student's health care action plan.
Assemble equipment needed.	
Wash your hands. Put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Tell the student you are going to measure his temperature by mouth.	
Determine if the student has recently had hot or cold liquids, or smoked.	If yes, wait at least 10 minutes before taking his temperature.
Have the student sit or lie down.	Do not take temperature while he is walking around.
Take a clean thermometer out of the clean storage container.	When using an electronic thermometer follow the manufacturer's directions exactly.
Inspect it for cracks and chips.	Discard defective thermometers.
Shake down the mercury to below 96°F.	
Run the thermometer under cool water, or place it in a disposable sheath.	The moisture makes it more acceptable to him.
Ask the student to open his mouth and lift his tongue. Place the bulb end of the thermometer under his tongue.	
Have him close his lips around the thermometer without biting down with his teeth.	Be sure he can breath adequately through his nose.
Leave the thermometer in place for 6 to 9 minutes.	Stay with the student. Watch to see the thermometer stays correctly in place; hold it, if necessary.

Steps	Notes
Take the thermometer out of the student's mouth.	
Remove and throw away the disposable thermometer sheath if one was used. Hold the stem end of the thermometer and wipe with a tissue or paper towel from the stem towards the bulb.	Refer to Appendix C. Handling Body Fluids.
READ THE THERMOMETER: Hold the stem end of the thermometer with the scale facing upward.	
Locate the mercury column by slowly turning the thermometer.	If you cannot find the mercury, place the thermometer on a flat surface in a good light and move back and forth over it until the mercury can be seen.



Steps	Notes
Find the end of the mercury column between the bulb and the stem end.	The long lines represent degrees and short lines represent two-tenths of a degree.
Locate the printed number nearest to the left of the mercury column.	The temperature illustrated is 98.4°F.
Count the lines between the degree to the left and the end of the mercury column on the right.	The right end of the mercury represents the person's temperature reading.
If the results are within normal limits, have the student resume classroom activities as scheduled.	If the results are abnormal, follow the school's protocol and the student's health care action plan. Notify the parents if indicated.
Wash the thermometer.	Follow "Cleaning a Thermometer" guidelines found on page 13.
Remove and discard your gloves, if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.

Steps	Notes
Record the student's oral temperature.	Be sure to note date and time, temperature value and method used as well as any observations about his appearance and behavior, and the actions you took.
end	end

MEASURING A RECTAL TEMPERATURE:

Steps	Notes
Determine the need to measure the student's rectal temperature at school.	Refer to school district policy, physician's orders and student's health care action plan.
Assemble equipment needed.	
Wash your hands. Put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Tell the student you are going to measure his temperature rectally.	Use developmentally appropriate language.
Have the student lie down and turn on his side.	
Take a clean thermometer out of the clean storage container. Inspect it for cracks and chips. Shake down the mercury to below 96°F. Use a disposable sheath if desired.	Discard defective thermometers. When using electronic thermometers follow manufacturer's directions exactly.
Put a small amount of lubricating jelly on a piece of tissue. Lubricate the bulb of the thermometer.	Lubricate 1 to 1½ inches.
Provide the student with a drape for privacy.	Remove clothing to expose his buttocks.
With one hand raise the upper buttock until you see the anus. With the other hand gently insert the bulb 1 to 1½ inches through the anus into the rectum (less for smaller child).	Always keep a firm hold on the thermometer while it is in the rectum.
Leave the thermometer in place for 3 to 5 minutes.	

Steps	Notes
Remove thermometer from the rectum. Holding the stem end, wipe it with a tissue from stem to bulb.	To remove lubricant and feces.
Remove and throw away the disposable thermometer sheath if one was used. Wipe the student's perineum if needed.	Refer to Appendix C. Handling Body Fluids.
Assist him to pull up his clothes.	
Read the thermometer.	See page 9.
If the results are within normal limits have the student resume regular classroom schedule.	If abnormal, follow the school's protocol, and the student's health care action plan. Notify the parents if indicated.
Wash the thermometer.	See "Cleaning a Thermometer" page 13.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Record the temperature.	Be sure to note date and time, temperature value and method used as well as any observations about his appearance and behavior and actions you took.
end	end

MEASURING AN AXILLARY TEMPERATURE:

Steps	Notes
Determine the need to measure the student's axillary temperature at school.	Review school policy, the physician's orders and the student's health care action plan.
Assemble equipment needed.	
Wash your hands. Put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Tell the student you are going to measure his temperature by placing a thermometer under his arm.	Use developmentally appropriate language.
Have student lie down, sit in a chair or sit on your lap.	

Steps	Notes
Take a clean thermometer out of the clean storage container. Inspect it for cracks and chips. Shake down the mercury to below 96°F.	Discard defective thermometers. When using electronic thermometers follow manufacturer's directions exactly.
Take the student's arm out of the sleeve of his clothing. If the axilla is moist with perspiration, gently dry it with a paper towel.	
Place the bulb of the thermometer in the center of the armpit. Put the student's arm securely across his chest or abdomen.	Hold the thermometer and the student's arm if needed.
Leave the thermometer in place for 9 to 11 minutes.	Stay with the student.
Remove the thermometer from the axilla. Holding the stem end, wipe it with a tissue from stem to bulb.	Remove and throw away the disposable thermometer sheath if one was used. Refer to Appendix C. Handling Body Fluids.
Assist him to put on his clothing.	
Read the thermometer.	
If the results are within normal limits have the student resume scheduled classroom activities.	If abnormal, follow school's protocol and the student's health care action plan. Notify the parents if indicated.
Wash the thermometer.	See "Cleaning a Thermometer" on page 13.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Record the result.	Be sure to note date and time, temperature value and method used as well as any observations about his appearance and behavior, and actions you took.
═end═	═end═

CLEANING A THERMOMETER:

Steps	Notes
Wear disposable gloves, if indicated, and hold the thermometer at the stem end. Use a clean gauze pad, tissue, or cotton ball or to wipe the thermometer from the stem to the bulb.	Use of a disposable thermometer sheath does not eliminate the need to wash and disinfect all glass thermometers. Clean and disinfect electronic thermometers according to manufacturer instructions.
Discard used gauze (tissue, cotton).	Refer to Appendix C. Handling Body Fluids.
Apply liquid soap to another gauze pad (cotton ball, tissue).	
Holding the thermometer firmly, twist the soapy gauze around the thermometer from the stem to the bulb; use friction. Discard the gauze.	Move from the cleanest to the dirtiest area.
Holding the thermometer under cool running water, repeat the process. Discard the gauze.	
Dry the thermometer with a dry gauze.	
Inspect the thermometer for cracks and chips.	Discard defective thermometers.
end	end

SHAKING DOWN THE MERCURY:

Steps	Notes
Hold the thermometer firmly between your fingers and thumb at the stem end.	Shake your hand loosely from the wrist as if you were shaking water from you fingers.
Repeat until mercury is below 96°F.	Stand clear of any hard surfaces to avoid hitting them and breaking the thermometer.
Place the clean thermometer in the germicidal solution.	Leave the thermometer in solution for the length of time recommended by the manufacturer. Change solution and wash the storage containers weekly or as recommended by manufacturer.
Remove and discard your gloves, if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
end	end

PULSE

Definition: The rhythmical expansion and contraction of the arteries resulting from the pumping action of the heart.
Pulse rate is the number of beats per minute; rhythm is the regularity of the beat; force is the strength of the beat.

Purpose: The pulse rate is an indirect measurement of heart action and the circulatory system.

Equipment: A watch or clock with second hand, or with a digital display of seconds. A stethoscope may be used to listen to an apical pulse or peripheral pulse.

Normal Pulse Range in Children

Age	Pulse Rate	Age	Pulse Rate
2 yr	80 to 130	8 yr	70 to 110
4 yr	80 to 120	10 yr	70 to 110
6 yr	75 to 115	adolescence	60 to 110

Steps	Notes
Determine the need to measure the student's pulse at school.	Review physician's orders and the student's health care action plan.
Measure the radial pulse.	Pulse may also be measured where other superficial arteries can be compressed against a bone, such as the brachial, femoral, dorsalis pedis; and the carotid.
Wash your hands.	Refer to Appendix B. Handwashing.
Tell the student you are going to count his pulse.	Use developmentally appropriate language.
Have the student sit or lie down.	Take the pulse before performing any upsetting procedures such as taking the temperature.
Have the student's hand and arm in a comfortable position and well supported.	Be sure his clothing is not constricting his circulation.

Steps	Notes
Find the radial pulse by placing the tips of your middle three fingers on the palm side of the student's wrist near the base of his thumb and directly next to the bone. Press lightly until you feel the beat.	Never use your thumb as its own pulse may confuse you. Don't press too hard or you may stop the flow of blood and not be able to feel any pulse.
When you have found the pulse, observe the rhythm and the force.	
Note the time in seconds on your watch. Count the pulse beats your fingers feel for a full minute (sixty seconds).	Always use a full minute count if the rate is irregular. You can count the pulse for 30 seconds and multiply by 2 if it is regular and there are no other contraindications.
Wash your hands.	Refer to Appendix B. Handwashing.
If the results are within normal limits, have the student resume his classroom activities as scheduled.	If the results are abnormal, follow the school's protocol and the student's health care action plan. Notify the parents, if indicated.
Record the location of the pulse you counted as well as the pulse rate, rhythm and force.	Also note the activity of the student when the pulse was taken (sleeping, sitting, crying, etc.) and any action you took.
end	end

RESPIRATIONS

Definition: The process of inhaling and exhaling; breathing.
Respiratory rate is the number of breaths taken per minute.
Each rise and fall of the chest is a single respiration.

Purpose: To provide an indirect measure of lung functioning.

Equipment: A watch or clock with a second hand or with a digital display of seconds.

Normal Respiratory Rate in Children

Age	Resp. Rate	Age	Resp. Rate
2 yr	20 to 30	8 yr	18 to 24
4 yr	20 to 30	10 yr	18 to 24
6 yr	20 to 26	adolescence	12 to 20

Steps	Notes
Determine the need to measure the student's respirations at school.	Review the physician's orders and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Hold the student's wrist just as if you were taking his radial pulse. Fold his arm across his chest so you can feel his breathing.	It is important to count respirations at a time the student is quiet and unaware of your intent.
Look, listen and feel for respiratory effort.	Normal respirations are almost silent.
Count respirations for a full minute (sixty seconds) by your watch or clock.	It may be permissible to count for 30 seconds and multiply by 2 if the rate is regular.
If the results are within normal limits, have the student resume his classroom activities as scheduled.	If the results are abnormal, follow the school's protocol and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Record the rate, quality, depth and regularity of the respirations.	Also note your observations of degree of respiratory effort, any sounds you heard and any action you took.
end	end

BLOOD PRESSURE

Definition: Pressure of the blood against the walls of the arteries, primarily maintained by contraction of the left ventricle of the heart.

Purpose: To provide an index of circulatory system functioning (elasticity of the arterial walls, peripheral vascular resistance, efficiency of the heart as a pump, blood volume).

Equipment: Sphygmomanometer with correct size cuff, stethoscope.

Normal Blood Pressure Readings in Children

Age	Range
6 years and under	78/48 to 114/80
7 - 9 years	85/52 to 120/80
10 - 12 years	90/58 to 134/84
13 - 49 years	90/60 to 140/90

Steps	Notes
Determine the need to measure the student's blood pressure at school.	Review the physician's orders and the student's health care action plan.
Assemble your equipment.	
Wash your hands.	Refer to Appendix B. Handwashing.
Tell the student you are going to measure his blood pressure.	Use developmentally appropriate language and allow him to handle the equipment.
Provide a private non-distracting, quiet environment if possible.	Blood pressure is affected by environmental and biological factors as well as medications and drugs.
The student should be seated with his right arm fully exposed and resting on a supportive surface so the cuff can be applied at heart level.	The right arm is recommended. For consistency use the same limb each time at approximately the same time of day.
Have the student's hand palm up.	

Steps	Notes
Select the appropriate sized cuff and apply it snugly to the upper arm centering the bladder of the cuff over the artery and leaving a space of 1 inch above the antecubital area for placement of the stethoscope.	Size of the cuff is determined by the child's size not his age.
The cuff should cover no less then 1/2 and no more than 2/3 the length of the upper arm.	A cuff that is too narrow will produce an apparent rise in blood pressure. A cuff that is too wide will produce an apparent decrease in blood pressure.
The bladder within the cuff should encircle the girth of the arm and not overlap or leave a gap.	Folding a flexible cuff to the correct size may be easier and more effective than using a premeasured cuff that is "almost" right. The cuff should be of consistent width each time the blood pressure is measured.
Palpate the brachial artery and inflate the cuff until the palpated pulse is lost. Then pump for an additional 20 to 30 mm. of mercury beyond that. Note this value.	This eliminates the auscultatory gap, the temporary disappearance of second phase blood pressure sounds.
Deflate the cuff slowly and completely. Wait 60 seconds.	Have student relax his arm and hand.
Reinflate the cuff rapidly to about the point previously noted to be 30 mm. Hg above where the radial pulse disappeared.	
With the earpieces in place, apply the stethoscope over the brachial artery using either the bell or diaphragm.	
Holding the stethoscope in place, release the pressure within the cuff at an approximate rate of 2 mm. of mercury/second.	Too rapid a release of pressure gives inaccurate readings.

Steps	Notes
As the pressure is released the phases of "Korotkoff Sounds" (I to V) will be heard.	Korotkoff Sounds: I - The period marked by the first appearance of faint, clear tapping sounds which gradually increase in intensity (systolic pressure). II - The period during which a murmur of swishing quality is heard. III - The period during which sounds are crisper and increase in intensity.
[In children the fourth and fifth phases frequently occur simultaneously and often there is no apparent fifth phase so that sounds are audible to zero.]	IV - The period marked by the distinct, abrupt muffling sound so that a soft, blowing quality is heard (diastolic pressure). V - The point at which sounds disappear.
Wash your hands.	Refer to Appendix B. Handwashing.
Record the reading and compare it with previous values.	Record 1st phase / 4th phase or 1st phase / 4th phase / 5th phase and indicate the student's position (lying [L], standing [St], sitting [Si]), which limb was used (right arm [RA], left arm [LA], right leg [RL], left leg [LL]), and the size of BP cuff.
If the results are within normal limits, have the student resume his classroom activities as scheduled.	If the results are abnormal, follow the school's protocol and the student's health care action plan.
ELECTRONIC AND ULTRASONIC METHODS: This equipment utilizes electronic circuity or reflected sound to detect blood flow or movement of an arterial wall under an occluding cuff. It can be used with addition equipment to automatically inflate and deflate the cuff and record the findings.	Present use in school settings is unlikely. Read specific instructions before operating each machine. Note specifically what sounds are being measured, and whether the equipment measures Korotkoff IV or V phases or both as the diastolic pressure.
══end══	══end══

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HEIGHT and WEIGHT

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, occupational therapist, physical therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Monitoring of height will not usually be delegated by the school RN when there is evidence of arrested growth.
Monitoring of weight will not usually be delegated by the school RN when there is evidence of frequent fluctuations or dramatic changes in weight.

REMARKS:
Appropriate equipment must be available. Record on growth curve chart. Medications might affect fluctuation.

Appendix A

HEIGHT

Definition: The distance from the base to the top of something. The measurement from the bottom of the heel to top of the head.

Purpose: To detect malnutrition; to provide information for early intervention in nutritional disorders and genetic conditions; to monitor and evaluate treatment; to monitor normal growth.

Equipment: Measuring scale marked in 1/8 inch increments and mounted to a vertical, flat surface (wall), headboard about 6 inches wide that makes a right angle to the measuring scale. "Infant-type" measuring board with a rigid headpiece and movable footpiece for horizontal measurements.

STANDING	LYING DOWN
Have the student stand at the measuring scale without his shoes.	Place the student supine (on his back) on the measuring board without his shoes.
Ask the student to stand tall, look straight ahead, and have his shoulder blades, buttocks and heels touching the measuring tape while his heels are flat on the floor.	Check his body alignment and ask the student to extend his trunk and legs as fully as possible. Check to see that his heels, buttocks, and shoulders are in contact with the measuring board.

STANDING	LYING DOWN
Lower the headboard until it firmly touches the crown of the student's head and creates a right angle with the measuring surface.	Have one person hold the student's head firmly against the headboard being sure the student's eyes are pointed directly at the ceiling.
	Have a second person extend the student's legs and place the footboard firmly against the student's heels while his toes are pointing upward.
Read the height to the nearest 1/8 inch where the bottom of the headboard meets the measuring tape.	Read the length to the nearest 1/8 inch where the inside of the footboard meets the heel and the measuring board.
Record the height with percentiles on the student's record. Graph the result on the student's age-appropriate growth chart.	Record the length with percentiles on the student's record. Graph the result on the student's age-appropriate growth chart.
Compare this measurement with previous measurements to determine pattern and changes.	Compare this measurement with previous measurements to determine pattern and changes.
If appropriate, privately tell the student his height.	If appropriate, privately tell the student his length.
Have the student resume his scheduled classroom activities.	Return the student to his scheduled classroom activities.
end	end

WEIGHT

Definition: A measure of the heaviness or mass of an object.

Purpose: To detect malnutrition, provide information for early intervention in nutritional disease and genetic conditions, monitor and evaluate treatment.

Equipment: A beam balance scale with a platform and non-detachable free-sliding weights. The scale should be marked in increments of ¼ pound and must have a zeroing adjustment. Spring balance scales are not recommended because of progressive loss of accuracy and increments generally greater than ¼ pound.

Steps	Notes
Place scale on firm, non-carpeted surface.	Provide as much privacy as possible.
CHECK SCALE FOR ZERO BALANCE: Remove everything from the scale. Place both weights directly at zero. Move the adjustable zeroing weight or screw until the arrow on the right hand side of the scale rests in the exact center.	This is done weekly, whenever the scale is moved, and at the start of each weight screening session.
Have the student remove his shoes and heavy clothing.	Periodic weights should be done with the student wearing the same or the same type of clothing each time.
Have the student stand up straight in the center of the scale platform with his hands at his side.	Standing, leaning to the edge of the platform, or wiggling affects the accuracy of the measurement.
Slide the weight back and forth until the balance arrow on the right hand side of the scales rests in the exact center.	Take a second reading for accuracy. They should be within ¼ pound.
Return the weights to the zero position. Have the student step off the scale.	
Record the weight with percentiles on the students record. Graph the result on the student's age-appropriate growth chart.	These and all student health records are confidential information.
Have the student redress.	
If appropriate, privately tell the student his weight.	
If the results are within normal limits, have the student resume his classroom activities as scheduled.	If the results are abnormal, follow the school's protocol and the student's health care action plan.
A student wearing an orthosis or prosthesis, or in a wheelchair, can be weighed with the device.	If possible the orthosis, prosthesis or wheel chair should be weighed separately. This weight is subtracted from the combined weight of the student wearing or using the device.

Steps	Notes
The student should be wearing or using the same device each time he is weighed.	When a device is repaired or a new device obtained it would need to be weighed.
end	end

Care of Equipment

CALIBRATE THE SCALE EVERY THREE MONTHS: Remove everything from the scale. Place both weights at zero.	
Weigh a calibrated or standard unit.	Calibrated weights (weights of known value) can be obtained from an equipment company or department store. A standard unit of weight can be established, such as three specific books, and consistently used for calibration.
Adjust the zeroing mechanism if necessary.	
Check the previous reading.	They should agree to within ¼ pound.
Keep a maintenance log with date and weight of the unit used.	
end	end

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PREPARE NOURISHMENT
specified in Health Care Action Plan

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, occupational therapist, physical therapist, teacher, food service personnel, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Student and parent can inform school personnel of procedure being used at home.
Parent shall provide specialized nourishment.

Appendix A

PROCEDURE

Definition:	Nourishment is that which supports life and growth in a living organism; sustenance.
Purpose:	To provide additional nutrients and fluids to the student who is unable to meet all his nutritional needs with regular meals.
Equipment:	As specified in each student's Health Care Action Plan.

Steps	Notes
Determine the need to prepare nourishment for the student in the school setting.	Review the student's health care action plan carefully to be sure you understand how the food is to be prepared.
Check to see that all required ingredients and equipment are on hand.	
Be sure the food sent from home is properly stored during the school day until it is needed.	Improper storage or unsanitary handling can make the food unsafe to eat.
Always wash your hands before preparing food.	Refer to Appendix B. Handwashing.

Steps	Notes
Keep the preparation area and the utensils clean.	
Be sure the cutting board, table, and counter top are washed thoroughly after raw meat, fish, turkey, or chicken has been prepared on them.	Meat and poultry, especially chicken, may have organisms that could cause illness if the food was eaten raw.
Be sure fruits, vegetables, and whole fish are washed before they are prepared.	Meat should not be washed but can be wiped with a dry paper towel.
Keep any foods that spoil easily in the refrigerator.	Foods that breed harmful bacteria do so very quickly if they are not refrigerated. These include milk and milk products, fish, meat, custards, mayonnaise, salads and sandwiches made with mayonnaise, such as potato, egg, or chicken salad.
Also refrigerate any foods that will be served cold.	
It is best to steam vegetables or use a very small amount of water. This minimizes the loss of vitamins and minerals in cooking.	Don't overcook foods as this destroys nutrients and taste. The teacher's lounge may have a microwave oven that can be used to heat the student's food when the kitchen is unavailable.
Check the expiration dates on food supplements and formula.	Discard outdated items. Ask the parent for a new supply.
Check that all trash containers are covered.	This avoids attracting flies and disease-carrying insects.
Have the prepared nourishment arranged as attractively as possible when presented to the student.	How food is prepared makes a difference both in its nutritive value and in its taste. How food is served affects how it is enjoyed.
═end═	═end═

FEED STUDENT (ORALLY)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, occupational therapist, physical therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Feeding the student by mouth will not usually be delegated by the school RN when there is evidence of change in the student's oral motor swallowing, positioning and/or sensory abilities.

REMARKS:
Student and parent/guardian can inform school personnel of procedure being used at home.

Appendix A

PROCEDURE

Purpose: To provide nutrients and fluids to those students who are unable to eat without assistance; to prevent dehydration and fluid retention; to provide practice in appropriate eating skills.

Equipment: Adaptive eating and drinking devices, intake and output record, measuring containers, towel to protect clothing, warm wet washcloth.

Steps	Notes
Determine the need to feed the student at school.	Review the physician's orders and the student's health care action plan.
Determine if suctioning and/or postural drainage are necessary before feeding.	Routine postural drainage and suctioning are scheduled prior to eating to lessen the chance of vomiting if these procedures are employed too soon after eating. Additional suctioning may be necessary to allow the student to eat without choking from excess mucous production.

Steps	Notes
If needed, arrange for a consultation with the physical therapist or occupational therapist.	They can advise staff on appropriate feeding techniques and assistive devices.
Explain the procedure to the student.	Use developmentally appropriate language.
Wash your hands. Put on disposable gloves if appropriate.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Choose an area of the classroom or lunchroom that has the most suitable atmosphere for this task.	Area should be calm and organized yet allow the student to observe other students also eating.
Place the student in a sitting position if allowed.	Observe safety measures. Provide foot, trunk and head support for the student. Do not allow his neck to hyperextend as this interferes with swallowing. Keep his chin at midline.
Wash the student's hands and face if necessary.	This is especially important if the student will be assisting with his feeding.
Place a towel on the student's chest.	To protect his clothing.
Provide oral hygiene as needed.	This may stimulate the student's appetite.
Measure food (if required) and bring it to the student's table.	Have hot foods hot, cold foods cold, and cut into small bite sized pieces if needed.
Feed the student slowly with a small amount of food on the spoon, inserting the spoon on alternate sides of the mouth.	Hurry and impatience create frustration. Wipe drips from the bottom of the spoon. Allow the student to perform as much self-feeding as he can manage.
Check to see if the student needs assistance with opening his mouth, chewing, swallowing, controlling tongue thrust.	Observe his feeding behaviors. Review the physician's orders and the student's health care action plan.

Steps	Notes
Offer the student liquids throughout the meal.	Use a lightweight sturdy cup with lid, a drinking straw or tube offered at the side of his mouth, or other adaptive device to assist drinking. If needed, guide the student's hand as he brings a cup to his mouth.
Praise and encourage the student's efforts.	Be lavish. Watch for positive behaviors that you can reinforce.
Remove uneaten food from the student's table. Measure it if required.	
Return it to the kitchen for storage or discard it in an appropriate container.	Refer to Appendix C. Handling Body Fluids.
Provide oral hygiene and brush the student's teeth.	Refer to Chapter 13. Personal Hygiene. Oral hygiene.
Wash the student's face and hands. Remove the protective covering from his clothing.	
Remove your gloves, if used. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Have the student resume his scheduled classroom activity.	
Document feeding the student on his health record or treatment log.	Record date and time, what was eaten and drunk (measured if required), the quality of the feeding activity, any problems or milestones.
Summarize the student's need for and apparent benefit (or lack of benefit) from being fed at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

HYPERALIMENTATION / LIPIDS

high calorie intravenous [IV] feeding

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
This procedure is never delegated.

REMARKS:
Requires prescription from physician.

Appendix A

PROCEDURE

Definitions: Total parenteral nutrition [TPN] refers to the administration of either or a combination of:

Hyperalimentation - any solution with a glucose concentration of 20% or above for adults, 12.5% or above for children, which is administered through a catheter into a central vein.

Lipids (Fat Emulsion) - any solution containing essential fatty acids which is administered through a catheter into a central vein.

A central intravenous [IV] line refers to those catheters whose tips lie in the large central blood vessels. They are inserted only by a physician.

To administer IV fluids or TPN by central venous route shall mean any or all of the following:
adding containers of IV fluids/hyperalimentation/fat emulsion;
regulating the flow rate to comply with the physician's order.

Purpose: To provide nutrients by way of the intravenous route:

as a substitute for oral or nasogastric intubation, or gastrostomy feeding when these are not effective, are undesirable or hazardous.

as a supplement for those individuals demonstrating large nutritional deficiencies or increased caloric requirements.

as a means of putting the gastrointestinal tract at rest.

Equipment: IV pole, solutions, IV tubing, cannula clamp, luer lok injection caps (buffalo caps), alcohol swabs, disposable gloves, tape, 3 cc syringes with 22-25 gauge 1 inch needles, heparinized saline as ordered, filters, infusion pumps, and/or as ordered by the physician, plastic lined waste container.

PREPARATION AND STORAGE OF TOTAL PARENTERAL NUTRITION [TPN] SOLUTIONS:

Steps	Notes
Strict sterile technique is required for mixing and administration of TPN solutions in the home and school.	Individuals receiving hyperalimentation are particularly susceptible to catheter related infections.
All hyperalimentation solutions with additives will be stored at 4°C.	Hyperalimentation solutions without additives may be stored according to manufacturer's recommendations.
Hyperalimentation solutions prepared in the home/school should be mixed just prior to use. Refrigerate until actually needed.	Hyperalimentation solution prepared under laminar flow hoods may be administered beyond 24 hours if shown to be stable by the pharmaceutical supplier or manufacturer.
IV tubing and filter should be changed every 24 hours, and labeled with the date and time of change.	THIS WILL BE DONE AT HOME. It will be done at school only if absolutely necessary.
A 0.22 micron filter will be used at the terminal end of the administration set.	The filter removes particles, bacteria, and air from the IV fluid.
Lipids must be infused below the filter of hyperalimentation lines.	Particles are too large to go through a filter.
Luer Lok injection caps should be used on central venous lines.	To prevent incidence of air embolism, and inadvertent separation of IV tubing.
Hyperalimentation solutions should be administered using pump infusions.	To maintain a constant infusion rate which is calculated on a 24 hour basis.
Do not piggy-back other IV lines and solutions to the hyperalimentation line.	Except under direct physician's orders in an emergency when other venous access is unavailable or the urgency of the infusion solution precludes placement of another line.
end	end

BEST COPY AVAILABLE

ADMINISTRATION OF HYPERALIMENTATION - CHANGING THE IV BOTTLE OR BAG:

Steps	Notes
Determine the need to administer hyperalimentation at school.	Review the physician's orders and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Tell the student what you will be doing.	Use developmentally appropriate language.
Examine the solution and container for contamination or defects.	Obtain a new container of solution if problems are suspected. Return the suspect solution to IV supplier for proper investigation.
Examine the label.	To be sure the solution and additives are what were ordered by the physician.
Examine the insertion site.	Refer to Chapter 5. Medications, Give Intravenous [IV] Medication.
Clean the top of the bottle or bag with alcohol wipe.	
Clamp the tubing.	Use only cannula clamps. Use a tape slide to protect the tubing from damage.
Remove the tubing from the old bag or bottle.	
Insert the tubing connector into the appropriate outlet of the new fluid container.	
Suspend the container.	
Squeeze the drip chamber and release until half filled.	
Examine the tubing for trapped air. Remove any air.	Insert a needle with syringe into the closest port below the air. Clamp the tubing below the port. Withdraw fluid and air from the tubing with the syringe.

Steps	Notes
Adjust the rate of flow, usually with an infusion pump.	Volume per hour or drops per minute as ordered by the physician. Refer to Infusion Pump guidelines in Chapter 5: Give Intravenous [IV] Medication.
Document changing the hyperalimentation container on the student's health record or treatment log.	Record date and time the solution was started, the amount and type of solution infused from the previous container, the amount and type of the solution and additives hung.
Allow movement and ambulation.	As ordered.
Monitor vital signs and weigh as ordered.	Routine is vital signs every 4 hours; Daily weights at home.
end	end

ADMINISTRATION OF LIPIDS - CHANGING THE IV BOTTLE OR BAG:

Steps	Notes
Determine the need to administer lipids at school.	Review the physician's orders and the student's health care action plan.
Do not shake the emulsion container.	Agitation of emulsion may cause fat globules to aggregate.
Wash your hands.	Refer to Appendix B. Handwashing.
Inspect the container of fat emulsion.	Look for signs of altered stability: Inconsistency in texture and color Separation of oil
Examine the insertion site.	Refer to Chapter 5. Medications, Give Intravenous [IV] Medication.
Cleanse the connectors with alcohol or appropriate disinfectant.	
Connect the tubing to the emulsion container. Clear the tubing of all air. Use gravity flow only, not the infusion pump.	Air in the system may cause an air embolus in the student.
Cleanse the connectors with alcohol or appropriate disinfectant.	

Steps	Notes
Connect IV tubing to Y-tube connection closest to the insertion site; insert tubing primed with IV fat emulsion directly into this site.	This reduces the length of time the emulsion comes in contact with substances that may affect its stability.
Do not use in-line filters.	Particles of fat emulsion are too large to go through a filter.
Explain the procedure to the student.	Use developmentally appropriate language.
Document the student's vital signs.	
Document lipid administration on the student's health record or treatment log.	Record date and time the solution was started, the amount and type of solution infused from the previous bottle, the amount and type of the solution and additives hung.
end	end

CHANGING PERIPHERAL IV TUBING:

Steps	Notes
Determine the need to change the IV tubing at school.	Review the physician's orders and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Connect a new filter and extension tubing to the new main IV tubing.	
Clamp the new tubing.	Use only a cannula clamp. Use a tape slide to avoid damage to the tubing.
Examine the solution for contaminants or defects.	Discard if any problems suspected.
Examine the IV insertion site.	Refer to Chapter 5. Medications, Give Intravenous [IV] Medication.
Clean outlet of bottle or bag with alcohol wipe.	
Insert the tubing connector into the appropriate outlet or bottle/bag.	Squeeze the drip chamber while inserting.
Suspend the container.	Release the drip chamber.

Steps	Notes
Squeeze and release the drip chamber until half full.	
Unclamp the new tubing and flush out the air by gravity. Reclamp.	
Examine the new tubing for air bubbles. Remove air from the line.	Insert the needle of a 3 cc syringe into the port below the air. Clamp the tubing below the port. Withdraw the fluid and air until the bubbles are gone.
Clamp the old IV tubing and disconnect it from the cannula.	
Connect the new IV tubing to cannula or connect it to a small gauge needle and insert it into the buffalo cap.	
Tape all connections and/or secure with Luer Lok device.	
Adjust the rate of flow, usually with an infusion pump.	Follow physician's orders for volume per hour or drops per minute. Refer to Infusion Pump guidelines in Chapter 5: Give Intravenous [IV] Medications.
Document changing the IV tubing on the student's health record or treatment log.	Record date and time the tubing was changed, the amount and type of the solution infused, the amount and time of the solution hung.
end	end

HEPARINIZATION OF THE CATHETER:

Steps	Notes
Central venous catheters should be heparinized at least every 24 hours or as ordered by the physician and after each infusion administration and blood withdrawal.	Heparinization should be accomplished within 3-4 minutes after fluids have been stopped in order to prevent clotting. Refer to physician's orders and student's health care action plan.
Assemble the equipment of a clean, dry surface.	

Steps	Notes
Wash your hands thoroughly.	Refer to Appendix B. Handwashing.
Explain the procedure to the student.	Use developmentally appropriate language.
Prepare the syringe with the ordered amount of heparinized saline.	At least 2 cc of heparinized saline is necessary to fill the length of the catheter. The usual range ordered is 3 cc to 10 cc of 10 to 100 units of heparin per 1.0 cc of normal saline.
Scrub the diaphragm of the injection cap on the catheter with an alcohol swab for 15-30 seconds.	To remove surface bacteria.
Insert the needle of the syringe into the center of the diaphragm and slowly inject all but the last 0.5 cc of heparinized saline.	In order to maintain positive pressure and prevent backflow.
Remove the needle from the injection cap.	
Secure the exposed catheter to the student's body with tape.	
Wash your hands.	Refer to Appendix B. Handwashing.
Document heparinization of the catheter on the student's health record or treatment log.	Record date and time of the procedure, the concentration and amount of heparinized saline used for irrigation, any resistance encountered during irrigation, any complications encountered, an assessment of the student's knowledge, understanding and participation in this procedure.
end	end

CHANGING THE INJECTION (BUFFALO) CAP

Steps	Notes
Determine the need to change the injection cap at school.	Routine weekly change of injection cap will be done AT HOME. Injection cap will be changed at school only if it shows signs of wear or becomes disconnected from the catheter.

Steps	Notes
	Injection cap should be changed at the time that an infusion is finished or just prior to heparinization of the catheter.
Assemble the equipment on a clean, dry surface.	Only luer lok injection caps should be used on central intravenous lines.
Wash your hands thoroughly. Use disposable gloves, if appropriate.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Tell the student what you will be doing and why.	Use developmentally appropriate language.
Prepare a syringe with 0.5 cc of normal saline or heparinized saline.	Refer to physician's orders and student's health care action plan.
Remove sterile luer lok injection cap from package.	
Clean the diaphragm of this injection cap with an alcohol swab.	
Insert syringe needle into the diaphragm.	Keep the needle tip close to the entrance to avoid formation of an air bubble.
Hold the injection cap vertically and inject the 0.5 cc solution.	To fill the cap.
Remove the needle from the injection cap.	
Remove the tape securing the old injection cap to the catheter.	
Scrub the catheter-cap junction with an alcohol swab for 30 seconds and allow to dry.	To remove surface bacteria.
Clamp the catheter over a slide tape.	To avoid damage to the catheter.
Remove protective cap from prefilled (new) injection cap.	Avoid contamination of screw end of cap.
Unscrew old cap and replace it with the prefilled (new) injection cap.	Discard old injection cap into plastic lined waste container; refer to Appendix C. Handling Body Fluids.

Steps	Notes
Unclamp the catheter.	
Tape the catheter - cap junction.	To minimize chance of inadvertent separation.
Flush the catheter with heparinized saline or reconnect to the prescribed infusion.	Refer to the physician's orders and the student's health care action plan.
Remove and discard your gloves, if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document changing the injection cap on the student's health record or treatment log.	Record date and time, type and amount of solution used to fill the cap, concentration and amount of heparinized saline used for irrigation if any, type and amount of infusion solution reconnected, student's participation in and reaction to this procedure, any complications, any action you took.
end	end

Steps	Notes
Inform the appropriate school staff of the potential benefits and side effects of receiving hyperalimentation and/or lipids.	This will allow the staff to plan to optimize the student's performance, and to report any reactions to this treatment that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from receiving hyperalimentation / lipids at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

USE OF A TAPE SLIDE ON THE CENTRAL CATHETER:

Steps	Notes
To prevent damage to the catheter from repeated clamping make a ring of tape approximately 1 inch in diameter with sticky side out, then face with a second ring of tape sticky side in.	A band-aid may be used instead of a tape ring.
Pull the injection cap and catheter through the center of the tape slide.	
Place a cannula clamp over the tape slide.	Use only cannula clamps on the catheter. Clamps with teeth or prongs cause abrasions or severing of the catheter.
Change the position of the tape slide each time the catheter is clamped.	Changing the position of the clamp prevents catheter damage.
Chart the use of the tape slide on the student's health record or treatment log.	Document the student's understanding of the purpose and use of the tape slide.
end	end

DRESSING CHANGE AND CATHETER EXIT SITE CARE:
REQUIRES STERILE TECHNIQUE TO PREVENT INFECTION.

THIS PROCEDURE SHOULD BE DONE AT HOME.
Changing the dressing for a central venous catheter at school is not recommended.
There is a risk of dislodging the catheter and contaminating the insertion site.

PHYSICIAN REFERRALS FOR SCHOOL MAINTENANCE OF CENTRAL VENOUS LINES AND TOTAL PARENTERAL NUTRITION ADMINISTRATION NEED TO INCLUDE THE FOLLOWING INFORMATION:

I. Orders for hyperalimentation will include:

- A. exact composition of the solution
- B. the type and amount of additives per liter
- C. the amount to be infused
- D. the infusion rate
- E. the frequency and/or specific time of infusion
- F. route of administration

II. Orders for fat emulsions will include:

- A. the amount to be infused
- B. the rate of infusion
- C. the frequency and/or specific time of infusion
- D. the route of administration

III. Orders for heparinized saline for catheter irrigation will include:

- A. the units of heparin per cc of saline
- B. the volume of solution to use per irrigation
- C. the frequency of irrigation

IV. Orders for handling complications will include:

- A. what to do if the catheter is dislodged
- B. what to do if there is resistance in the central venous line
- C. what to do if there is back-up blood in the central venous line

V. Other referral information should include:

- A. the level of activity of the student
- B. name of the physician to contact to report signs or symptoms of catheter complication, fever greater than __°F or metabolic complications
- C. the name of an approved company to provide solution and equipment for administration of TPN
- D. the minimum frequency of nursing visits at school.

GASTROSTOMY FEEDINGS
(tube already in place)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Gastrostomy feeding will not usually be delegated by the school RN when there is evidence of obstruction or malabsorption, infection at insertion site, or displacement of the tube.

REMARKS:
Requires prescription from physician.
School RN will follow health care action plan for reinsertion of tube.

Appendix A

PROCEDURE

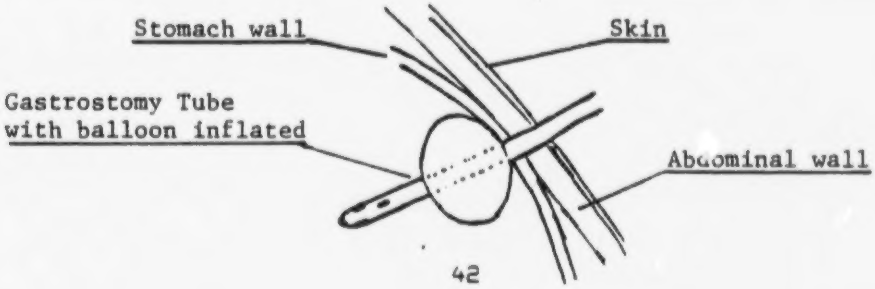
Definition: A gastrostomy is the surgical construction of a permanent opening from the external surface of the abdomen into the stomach, usually for inserting a feeding tube.

Purpose: To provide a safe method of feeding a child who cannot tolerate oral feeding or receive adequate nourishment by other means.

Equipment: Prescribed amount of formula / nourishment at room temperature, 20 - 50 cc. syringe or feeding bag and infusion pump, clamp, prescribed amount of water, paper or hypoallergenic tape, 2x2s, small rubber bands, disposable gloves if indicated, plastic lined waste container.

Precautions: -If the gastrostomy tube comes out of the stoma, tape several pieces of gauze over the stoma and follow the student's health care action plan for whom to notify and how to reinsert the tube.
-Excessive pulling on the tape around the gastrostomy tube may cause widening of the stoma with leakage of irritating gastric juices.

Steps	Notes
Determine the need for gastrostomy feeding at school.	Review physician's orders and student's health care action plan. Feedings should be at least 2 hours apart, preferably longer for school age child.
Bring the student to an area which is relatively calm and provides privacy.	Area should be clean and warm with as much privacy as is reasonable where the student can remain undisturbed during the feeding and for approximately 30 minutes afterwards.
Tell the student what you will be doing; encourage the student to perform as much of his care as possible.	Use developmentally appropriate language.
Gather the necessary equipment and supplies and place them on a clean area next to the student.	Have the feeding warmed to room temperature or tepid.
Position the student appropriately. Hold the younger child; prop the older child on pillows or use a wheelchair.	Refer to student's health care action plan and physician's orders. Most frequently the position is upright or semi-reclining position, with the head at about a 45 degree angle.
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Check for proper placement of the gastrostomy tube.	Some student's may use a removable gastrostomy tube and insert it for each feeding. Parent should premark the tube with a piece of tape or laundry marker to indicate prescribed depth of insertion.
Gently pull back on the gastrostomy tube.	To make sure the tube is tight against the stomach wall.



Steps	Notes
Attach the syringe. Unclamp the tube.	
Gently draw back on the plunger. Note the amount of gastric content or residual feeding on the markings of the syringe. Gently push this fluid back into his stomach. Reclamp the tube.	If you feel resistance, or if you aspirate residual feeding or gastric content, the tube is probably in place.
If the gastrostomy tube does not seem to be properly placed, DO NOT FEED.	Refer to student's health care action plan.
If the residual aspirate is more than the amount specified by the student's physician, push the fluid back into the stomach; delay the feeding and check again in 30 minutes.	If no amount is specified by the physician, a general guideline for large amount of residual aspirate is: more than 50 cc in a child, more than 100 cc in an adolescent. Subtract the amount of aspirate refed from the amount of nutrient to be given at this feeding.
Administer the feeding: Determine the method of gastrostomy feeding to be used at school.	
An outline for the GRAVITY METHOD is included in these guidelines.	To use the FEEDING BAG AND INFUSION PUMP METHOD, refer to the physician's orders, student's health care action plan and manufacturer's instructions.
Attach feeding syringe or gravity feeding bag to the clamped tube.	Gastrostomy feeding by gravity will usually take 20 to 45 minutes.
Fill the syringe/bag with room temperature nutrient solution, holding it at an angle to minimize the amount of trapped air in the tube.	With a thick solution it may be advisable to instill a small amount of water before the feeding. This moistens and lubricates the tube.
Unclamp the tube.	
Allow the feeding to flow by gravity with syringe about 4 to 4 3/4 inches above the student's abdomen.	Do not apply pressure. Gravity will start the feeding.
Refill the syringe before it is empty until you have used the prescribed amount of nutrient solution.	This avoids introducing air into the stomach.

Steps	Notes
Provide oral stimulation whenever possible.	Some children like to suck on a pacifier or ice chips during feeding; others may take a small oral feeding simultaneously with the tube feeding.
Observe the student's reactions during the feeding. **STOP THE FEEDING** if any of the following occur:	
a) vomiting	may require oral suctioning
b) respiratory distress	from vomiting with aspiration.
c) sudden distention or signs of left upper quadrant or epigastric pain	from gastric rupture due to excessive volume of feeding
d) agitation	from displacement of the gastrostomy tube resulting in the feeding leaking into peritoneum
e) distention and vomiting	from displacement of the gastrostomy tube leading to blockage the entrance to intestine.
When the feeding is completed, instill the prescribed amount of water, usually 10 to 30 cc.	To clear the nourishment from the tube.
Clamp the tube before the water has cleared from it. Cover the end of the tube with a 2x2 and secure with a rubber band.	Place the clamp below the "Y" in the tube to avoid breaking the balloon. Check doctor's orders: clamping may be contraindicated. Tube is usually kept clamped between feedings to prevent loss of feeding fluid and to keep air from entering the stomach.
Maintain the student's position for 30-60 minutes after feeding.	To prevent regurgitation.
Observe the stoma and the skin around the gastrostomy.	Note any unusual drainage, redness or breakdown of skin. Notify parents and physician if indicated.
Cleanse with soap and water as needed; rinse and dry.	Routine daily skin care will be done at home.
Reapply a gauze dressing (folded 2x2) around the stoma.	As ordered.

Steps	Notes
Secure the tube to the student's abdomen or to the dressing.	Use tape or an abdominal binder to hold the tube unobtrusively in place between feedings.
If the student was unable to consume the entire feeding, measure any remaining nourishment.	Record these amounts and the reason they were not consumed.
Return the used equipment to the kitchen or workroom for cleaning. Discard the unconsumed feeding.	Refer to Appendix C. Handling Body Fluids. Refer to Chapter 22. Care of Equipment.
Give good mouth care.	Rinse mouth; brush teeth. Refer to Chapter 13: Oral Hygiene.
Remove and discard your gloves if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document the gastrostomy feeding on the student's health record or treatment log.	Record the date and time, the type and amount of aspirate obtained, whether the aspirate was refed or discarded, the type and amount of feeding administered, the method of gastrostomy feeding, the amount of water administered, the condition of the skin around the gastrostomy, any skin care provided, the student's reaction to the feeding, any complications, any actions you took.
Inform the appropriate school staff of the potential benefits and side effects of gastrostomy feedings.	This allows the staff to plan to optimize the student's performance, and to report any reactions to the feedings that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from receiving gastrostomy feedings at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

NASOGASTRIC TUBE FEEDINGS
(tube already in place)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Nasogastric tube feeding will not usually be delegated by the school RN when there is evidence of displacement of the tube, obstruction of the tube, excessive vomiting or diarrhea.

REMARKS:
Requires prescription from physician.
School RN will follow health care action plan for reinsertion of tube.

Appendix A

PROCEDURE

Definition: A nasogastric tube is a plastic or rubber tube inserted through the student's nostril, down his esophagus and into his stomach.

Purpose: To administer nutrients directly into the gastrointestinal tract when the student is unable to obtain adequate nourishment by mouth.

Equipment: Measured amount of formula or liquid nourishment, measured amount of water, 50 cc syringe with catheter tip, hypoallergenic tape, clamp, stethoscope, glass of water.

Steps	Notes
Determine need for nasogastric tube feeding in the school setting.	Review physician's orders and student's health care action plan.
Bring the student to an area providing relative calm and privacy. Tell the student what you will be doing.	Use developmentally appropriate language.
Have the student resting with his head elevated to 30-45 degree angle.	This lessens the possibility of aspiration; decreases vomiting.

Steps	Notes
Position the student as ordered:	Review health care action plan.
a) Turn the student to his right side -OR-	a) Facilitates passage of feeding into intestine.
b) Turn the student to his left side -OR-	b) Allows pooling of feeding in the stomach with emptying by peristalsis instead of gravity.
c) Have the student on his back.	c) Supine position creates greater danger of regurgitation.
Support the student in the desired position.	Use pillows and bolsters to make him comfortable and stable.
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Gather the equipment and supplies and place them on a clean area next to the student.	Have the feeding warmed to room temperature or tepid.
Check for proper tube placement:	Follow protocol in student's health care action plan.
a) Aspirate stomach contents. -OR-	a) Aspirated fluid should be obtained if tube is properly placed. If a large amount (over 50 cc in child, 100 cc in adolescent) is aspirated, measure and replace.
b) Place a stethoscope to the left of the xiphoid process and listen while introducing about 5 cc of air through the tube. -OR-	b) A gurgling sound will be heard if tube is properly placed.
c) Place the end of the tube in a glass of water.	c) If bubbles appear during expiration, tube is in trachea.
If the tube is not properly placed, **DO NOT FEED.**	Follow protocol in student's health care action plan for reinserting or removing the tube.
Administer the feeding:	
Attach syringe barrel to the feeding tube, keeping the tube clamped. Pour some of the feeding into the syringe.	Pouring the feeding slowly down the side of the syringe keeps the collection of air in the system to a minimum.

Steps	Notes
Hold the syringe 3 to 6 inches above the student's stomach level.	Elevation is used to regulate the flow and the force of the feeding. Do not feed him too quickly.
Unclamp the tube.	The feeding should take about 20 to 30 minutes.
Add more feeding as it is needed to keep the syringe from running dry.	This prevents air from entering the stomach through the tube during the feeding.
Provide oral stimulation (pacifier) during the feeding if prescribed.	To promote sucking and swallowing, and possibly stimulate digestion.
Observe the student for signs of distress during the feeding. IF DISTRESS IS NOTED STOP THE FEEDING and check placement of the tube.	Note vomiting, respiratory distress, sudden abdominal distention, agitation. Discontinue the feeding if the tube has been displaced. If the tube is correctly placed, allow student to rest before continuing the feeding.
End the feeding with the prescribed amount of clear water.	Use 20 to 50 cc to rinse the tube if no amount was prescribed.
Allow some of the water to remain in the tube. Clamp or plug the tube.	This prevents air from being introduced into the stomach at the next feeding.
Check the tube; retape it if necessary to secure it in place.	Make sure the student does not lie on the clamp and create a pressure area.
After feeding, allow the student to remain with his head elevated for the length of time prescribed.	This helps prevent vomiting and aspiration. Keep his head elevated 30 minutes if no specific time is indicated.
Measure unadministered feeding and water.	Record these amounts.
Return the equipment to the kitchen or workroom for cleaning.	Refer to Appendix C. Handling Body Fluids.
Provide oral hygiene; clean and lubricate nostrils.	Refer to Chapter 13: Oral Hygiene.

Steps	Notes
Remove and discard your gloves, if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Observe the student for restlessness, color change, distention after the feeding.	Take appropriate action.
Reposition the student for comfort after 30 minutes.	Change the elevation of his head. Check for pressure areas.
Have the student resume his scheduled classroom activities.	Remaining on his right side for an additional 30 minutes facilitates the emptying of his stomach.
Document nasogastric tube feeding on the student's health record or treatment log.	Note the date and time of the feeding, type and amount of aspirate, whether it was discarded or refed, type and amount of the feeding, the duration of the feeding, the student's reaction to the feeding, any problems, any action you took.
Inform the appropriate school staff of the potential benefits and side effects of the student receiving nasogastric tube feedings.	This allows the staff to plan to optimize his performance, and to report any reactions to this procedure that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from having nasogastric tube feedings at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
==end==	==end==

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ASSIST STUDENT TO TAKE OWN MEDICATION

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Assisting the student to take his/her own medication will not usually be delegated by the school RN when the medication requires taking blood pressure, or radial or apical pulse before or after administration; or with medication that requires nursing judgment to determine dose.

REMARKS:
All medications given in school should follow the requirement in the Standards and Regulations for Schools passed by the Colorado Board of Health.

Appendix A

PROCEDURE

Steps	Notes
Obtain the parent's written request and permission for medication.	Required by Colorado Standards section 14.5 and 14.6.
Determine the need for taking medication at school.	Carefully review the student's health care action plan.
Obtain written authorization of a physician.	Required by Colorado Standards for prescription medications; strongly recommended for non-prescription drugs sent by parents. Written protocol signed by a physician is required for each specific non-prescription medication which some school districts provide for students.
Have the medication provided by the parent in an individual pharmacy labeled bottle for the student who is to receive it.	Required by Colorado Standards for prescription medication. Use pharmaceutical company labeled bottle for non-prescription medications.

Steps	Notes
Store medications at school at the correct temperature in a secure, locked, clean container or cabinet.	Required by Colorado Standards.
Develop a written practical plan to have the student take his medication at the date and time prescribed.	Regular administration protects acceptable blood levels of medication.
Keep a written record of medications given at school.	Required by Colorado Standards.
When ready to take his medication, assist the student to assemble the medication and supplies needed.	These might include: the medication, a measuring spoon, water or other liquid, dressing for medication applied to the skin, tissue or cotton balls.
Have the student wash his hands, providing assistance as needed. Wash your own hands. Put on disposable gloves if appropriate.	Refer to Appendix B. Handwashing. and Appendix C. Handling Body Fluids.
Help the student review the five "R's" to ensure he is taking the correct medication.	Right name (of student) Right medication Right dose/amount Right time Right route (by mouth, injection, etc.).
Determine his blood pressure, pulse and/or correct dose if indicated.	Refer to the student's health care action plan.
Place the medication within reach of the student. Loosen the top of bottles or tubes.	Use assistive devices if necessary to maintain the student in a functioning position.
Assist the student as necessary: oral medications - steady his hand as he brings medication to his mouth. ointments - help him to apply the right amount to affected skin and dress it appropriately. eye drops - guide his hand; wipe excess liquid or ointment from under eye from nose to outer area.	Student's physical and mental limitations will determine the amount of assistance needed.

Steps	Notes
Observe the student for possible side effects.	Review the pharmaceutical literature for each medication the student is taking.
Help the student put his medication in its proper place after use.	
Dispose of used equipment. Remove and discard your gloves, if worn.	Refer to Appendix C. Handling Body Fluids.
Help student wash his hands and resume his scheduled classroom activities. Wash your hands.	Refer to Appendix B. Handwashing.
Document assisting the student to take his medications on the his health record or treatment log.	Record the date and time, the medication taken, the dosage, the name of the person assisting the student, any reactions to the medication, any problems encountered, any action you took.
Inform the appropriate school staff of the potential benefits and side effects of the student's medication.	This allows the staff to plan to optimize the student's performance, and to report any reactions to the medication that they observe.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from taking this medication at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

INSTRUCTIONS FOR THE STUDENT USING AN INHALER:

Steps	Notes
Remind the student to shake the inhaler well.	Medication must be thoroughly mixed with the propellent in order to deliver the correct dosage/spray.
Teach the student to hold the inhaler in a vertical position.	The inhaler will not spray if it is upside down; spray is decreased when it is held off vertical.
Instruct the student to breath out to the end of a normal breath.	To empty his lungs as much as possible.

Steps	Notes
Tell the student to close his lips and teeth around the mouthpiece of the inhaler.	Have him support the inhaler with one hand while steadying the tube with your other hand.
Instruct him to tilt his head slightly upward.	This helps to direct the spray past his teeth and tongue so it can reach his lungs.
Tell him to start to breath in slowly.	Breathing too fast will leave the medication in his mouth and throat, not in his lungs.
Remind him to spray the inhaler at the start of a breath.	To activate the spray mechanism squeeze the bottle down against the stem.
Teach him to breathe in as deeply as possible over 2 to 3 seconds. Then have him remove the inhaler from his mouth; close his mouth and hold his breath.	He should try to hold his breath for a count of 5 to 10.
Finally he should exhale and breath normally.	Do not have him take another "puff" until this dose has had time to work, usually 5 to 10 minutes.
Follow doctor's directions for the number of "puffs" to be taken and how often to take them.	Do not increase the dosage/frequency without consulting the physician.
Run warm water through the mouthpiece once a day.	To wash it and prevent clogging.
==end==	==end==

GIVE ORAL MEDICATION

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Administering medications to the student will not usually be delegated by the school RN when the medication requires taking blood pressure, or radial or apical pulse before or after administration; or with medication that requires nursing judgment to determine dose.

REMARKS:
All medications given in school should follow the requirement in the Standards and Regulations for Schools passed by the Colorado Board of Health.

Appendix A

PROCEDURE

Steps	Notes
Obtain parent's written request and permission.	Required by Colorado Standards. section 14.5 and 14.6.
Determine the need for taking medication at school.	Carefully review the student's health care action plan.
Obtain written authorization of a physician.	Required by Colorado Standards for prescription medications; strongly recommended for non-prescription drugs sent by parents. Written protocol signed by a physician is required for each specific non-prescription medication which some school districts provide for students.
Have the medication provided by the parent in an individual pharmacy labeled bottle for the student who is to receive it.	Required by Colorado Standards for prescription medication. Use pharmaceutical company labeled bottle for non-prescription medications.

Steps	Notes
Store the medications in the school at the correct temperature in a secure, locked, clean container or cabinet.	Required by Colorado Standards.
Develop a written practical plan to give the student his medication at the date and time prescribed.	Regular administration protects acceptable blood levels of medication.
Keep a written record of medications given at school.	Required by Colorado Standards.
Assemble the medication and supplies needed.	These might include the medication, a measuring spoon, water or other liquid.
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Determine the student's blood pressure, pulse and adjusted dose if indicated.	Refer to student's health care action plan.
Review the five "R's" to ensure the student is taking the correct medication.	Right name (of student) Right medication Right dose Right time Right route (by mouth, injection, etc.).
Give the student the authorized medication.	Return unused medication to secure area.
Observe the student for possible side effects.	Review the pharmaceutical literature for each medication the student is taking.
Dispose of used equipment. Remove and discard your gloves, if worn.	Refer to Appendix C. Handling Body Fluids.
Have the student resume his scheduled classroom activities.	
Wash your hands.	Refer to Appendix B. Handwashing.

Steps	Notes
Document giving oral medications on the student's health record or medication/treatment log.	Record the date and time, the medication, the dosage, the name of the person giving the medication and any reactions to the medication.
Inform the appropriate school staff of the potential benefits and side effects of the student's medication.	This allows the staff to plan to optimize the student's performance and to report any reactions to the medication.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from taking this medication at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

GIVE MEDICATIONS VIA GASTROSTOMY / NASOGASTRIC TUBE

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Administering medication by gastrostomy or nasogastric tube will not usually be delegated by the school RN when the medication requires taking blood pressure, or radial or apical pulse before or after administration; or with medication that requires nursing judgment to determine dose; or when there is evidence of displacement of tube, obstruction of tube, excessive vomiting or diarrhea. Note: It is advised by the Colorado Board of Nursing that this is not to be delegated.

REMARKS:
Requires prescription from physician.
School RN will follow the health care action plan for reinsertion of tube.
All medications given in school should follow the requirement in the Standards and Regulations for Schools passed by the Colorado Board of Health.

Appendix A

PROCEDURE

Definition:	A nasogastric tube is a plastic or rubber tube inserted through the student's nostril, down his esophagus and into his stomach.
Purpose:	To administer oral medication directly into the gastrointestinal tract when the student is unable to ingest it by eating, drinking and swallowing.
Equipment:	Measured amount of medication, measured amount of water, 50 cc syringe with catheter tip, hypoallergenic tape, clamp, glass of water, stethoscope, plastic lined waste container, disposable gloves.

Steps	Notes
Obtain parent's written request and permission for medication.	Required by Colorado Standards.
Determine the need for taking medication at school.	Carefully review the student's health care action plan.
Obtain written authorization of a physician.	Required by Colorado Standards for prescription medications; strongly recommended for non-prescription drugs sent by parents. Written protocol signed by a physician is required for each specific non-prescription medication which some school districts provide for students.
Have the medication provided by the parent in an individual pharmacy labeled bottle for the student who is to receive it.	Required by Colorado Standards for prescription medication. Use pharmaceutical company labeled bottle for non-prescription medications.
Store the medications in the school at the correct temperature in a secure, locked, clean container or cabinet.	Required by Colorado Standards.
Develop a written practical plan to give the student his medication at the date and time prescribed.	Regular administration protects acceptable blood levels of medication.
Keep a written record of medications given at school.	Required by Colorado Standards.
Wash your hands.	Refer to Appendix B. Handwashing.
Tell the student what you will be doing.	Use developmentally appropriate language.
Gather your equipment.	Place it on a clean work surface close to the student.
Prepare the medication: Measure liquid dose, Crush compressed tablets, Dissolve soft gelatin capsules in water	Leave all gastric irritants, digestive aids, coated tablets and sustained action or hard gelatine capsules intact. Be sure they can fit through the tube and the opening at the tip.

Steps	Notes
Position the student as for a tube feeding with his head elevated.	Support him in this position with pillows and bolsters.
Check for the proper placement of the tube.	Refer to Chapter 4. Fluids-Nourishment, Gastrostomy Feedings, and Nasogastric Tube Feedings.
Determine whether the medication can be given with the student's routine tube feeding or should be given between feedings.	Some medications are absorbed best when the stomach and upper intestine are relatively empty.

a) To administer medication BETWEEN FEEDINGS:

Attach the syringe to the tubing.	
Pour a small amount of water into the syringe.	This will help to lubricate the inside of the tube to facilitate passage of the medication as well as reduce the amount of air introduced into the stomach.
Unclamp the tube.	
Elevate the syringe 4-6 inches above the level of the student's stomach to allow the water to slowly enter the tube.	Use the height ordered by the physician.
Add the medication and sufficient fluids to keep the syringe from running dry and to ensure passage of the medication through the tube into the stomach.	Use the amount prescribed, if any.
End the procedure by giving 20 to 50 cc of clear water. Clamp the tube while some water remains in it.	Water helps to hydrate the student, cleans the tubing, and reduces the amount of air introduced at the next feeding. Follow the physician's orders and student's health care action plan.

b) To administer medication WITH THE FEEDINGS:

After the feeding has started and the nourishment is running well, add the prescribed medication.	Introduce the medication when it is most likely to be accepted and retained. Do not leave the medication to the end of the feeding.

Steps	Notes
Continue with the feeding.	Follow gastrostomy and nasogastric tube feedings procedures outlined in Chapter 4.
Clear away the equipment from the student's area.	Refer to Chapter 22: Care of Equipment.
Observe the student for possible side effects.	Review the pharmaceutical literature for each medication the student is taking.
Remove and discard your gloves, if worn. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	Remaining on his right side for an additional 30 minutes facilitates the emptying of his stomach.
Document giving medication via the gastrostomy or nasogastric tube on the student's health record or medication and treatment logs.	Record the date and time, the medication given, the amount of nourishment and water given, the student's reaction, any problems, any action you took.
Inform the appropriate school staff of the potential benefits and side effects of the student's medication.	This allows the staff to plan to optimize the student's performance and to report any reactions to the medication.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from taking this medication at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

GIVE INTRAVENOUS [IV] MEDICATION (with IV tube already in place)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Administering medication by IV is not to be delegated.

REMARKS:
Requires prescription from physician.
Given only by school RN.
If tube is obstructed, the school RN will follow the health care action plan.
All medications given in school should follow the requirement in the Standards and Regulations for Schools passed by the Colorado Board of Health.

Appendix A

PROCEDURE

Definition:	To administer prescribed fluids and/or medications directly into the student's vein using an established intravenous line. In school this will include adding IV bottles, adding medication into the IV tubing, volume set or IV bottle, regulating the rate of flow of infusion and medication, removing the needle or catheter when the infusion is finished (if ordered).
Purpose:	To provide water, electrolytes, vitamins, proteins, calories, and nutrients for the student who cannot maintain an adequate intake by mouth; to provide a means for the administration of medication.
Equipment:	May include some or all of the following: IV solution and/or medication, IV tubing with drip chamber and clamp, infusion pump, alcohol wipes or other appropriate disinfectant, syringes with small gauge needle, filter, extension tubing, intravenous standard, luer lok, injection cap, sterile gauze dressing, tape, heparinized saline, normal saline, disposable gloves, covered puncture resistant container, plastic lined waste container.

Special Precaution - EXAMINING THE IV INSERTION SITE:

To assess for infiltration, inflammation or infection by noting coolness, erythema, swelling and tenderness (1) upon arrival at school, (2) before and after giving medications, (3) before leaving school.

INFILTRATION	INFLAMMATION/PHLEBITIS	INFECTION
Cause: Cannula becomes dislodged from the vein due to improper securing of the needle, movement or trauma to the IV site, or defect in the vein.	**Cause:** Movement of the cannula within the vein; overuse of the vein; irritating solutions; clot formation; type and placement of the catheter.	**Cause:** Contamination of any part of the IV system; a break in sterile technique; transmission within the student of an infection in another area.
Symptoms: IV site is puffy, painful, cold, white and/or hard. The infusion is stopped or slowed. No blood returns in the IV line when the bottle is lowered.	**Symptoms:** IV site is puffy, painful, red and/or warm. Tenderness first at the site then along course of the vein. Arm feels warmer than other arm.	**Symptoms:** IV site is puffy, painful, red and/or warm. The student may have a fever. There may be purulent drainage from the site.
Actions: Follow student's health care action plan which may include instructions to discontinue the IV and apply a warm, moist compress to the site. Notify the physician and the student's parents.	**Actions:** Follow student's health care action plan which may include instructions to discontinue the IV and apply cool compress immediately for pain relief. Notify the physician and the student's parents.	**Actions:** Follow student's health care action plan which may include instruction to discontinue the IV and apply cold compresses immediately. Notify the physician and the student's parents.
Documentation: Record the date and time the observation was made; the condition of the site; the actions taken. ==end==	**Documentation:** Record the date and time the observation was made; the condition of the site; the actions taken. ==end==	**Documentation:** Record the date and time the observation was made; the condition of the site; the actions taken. ==end==

Special Precaution - **FACTORS THAT AFFECT THE RATE OF FLOW OF THE INTRAVENOUS INFUSION:**

- Factors within the individual
  - The size of the student
    - a larger person requires more fluid and utilizes it faster
  - The student's condition
    - student with cardiac or renal problems needs careful monitoring
  - The student's age
    - slower administration is required in the very young
  - The student's tolerance to the solutions
    - some solutions induce sensitivity and may be tolerated only at very slow rates
  - The prescribed solution for the student
    - the desired effect may depend on the speed of administration
  - The student's movement and activity

- Factors external to the individual
  - The pressure gradient between the IV infusion and the circulatory system
  - Friction within the infusion system
  - Physical characteristics of the infusion system
    - the diameter and length of the tubing
    - the gauge of the cannula
    - the size of the opening from the bottle/bag to the tubing
  - Characteristics of the fluid
    - viscosity
    - temperature
      - room temperature unless contraindicated
      - refrigerated fluids may cause diminished flow and vessel spasm
  - Condition of the vein
    - trauma during insertion
    - clots
    - vasoconstriction, venous spasm
  - Height of the column of fluid within the IV system
    - changing the height of the IV container above the student results in a ↑ or ↓ flow rate
      - a raise from 3 to 6 feet results in ↑ 400% of original flow rate
      - a raise from 4 to 6 feet results in ↑ 225% of original flow rate
      - a raise from 5 to 6 feet results in ↑ 144% of original flow rate
      - a raise from 4 to 5 feet results in ↑ 156% of original flow rate
      - to lower from 5 to 4 feet results in ↓ 64% of original flow rate
      - to lower from 4 to 3 feet results in ↓ 77% of original flow rate
  - Flow clamp problems/failures
    - clamp may slip and loosen
    - distortion of the plastic tubing resulting in a change inside diameter of the tubing that continues long after the clamp is adjusted
    - stretching of the tubing causing distortion and making the clamp ineffective

Special Precaution - DRUGS WHICH REQUIRE SPECIAL STUDENT SUPERVISION IF GIVEN AT SCHOOL:*

These drugs have the potential for causing allergic reactions or other severe side effects.

Inderal
First dose of digitalis derivatives
Antihypertensives
Antiarrhythmics
Antineoplastic drugs
Imferon
Magnesium sulfate
Paraldehyde
Dilantin
IV push antibiotics
Haldol
Innovar
Blood or blood products
Aquamephyton
Investigational drugs
Amphotericin B
First dose of any IV medication

*Compiled by the Boulder County Health Department / Visiting Nurse Association, January 1985.

Steps	Notes
Obtain parent's written request and permission for medication.	Required by Colorado Standards, section 14.5 and 14.6.
Determine the need to receive medication at school.	Carefully review the physician's orders and the student's health care action plan.
Obtain written authorization of a physician.	Required by Colorado Standards.
All orders for IV fluids and medications must include: Type of solution Type and amount of drugs to be added Rate of flow with total volume to be infused while at school Indications for discontinuing the IV.	Dosage of all drugs to be given IV at school must be within recommended range in manufacturer's literature.

Steps	Notes
Have the medication provided by the parent, physician, or IV service in an individual pharmacy labeled container for the student who is to receive it.	Required by Colorado Standards for prescription medication.
Store the medications in the school at the correct temperature in a secure, locked, clean container or cabinet.	Required by Colorado Standards.
A puncture resistant covered container must be used for discarding used needles.	Refer to Appendix C. Handling Body Fluids. Arrangements must be made with an appropriate laboratory or hospital for proper disposal of this container.
Develop a written practical plan to give the student his medication at the date and time prescribed.	Regular administration protects acceptable blood levels of medication.
Keep a written record of medications given at school.	Required by Colorado Standards.
end	end

CHANGING THE IV BOTTLE OR BAG:

To continue the infusion with the same or different solution without contamination or introduction of air into the system.

Steps	Notes
Determine the need to change the IV infusion container at school.	Read the student's health care action plan and review the physician's orders.
Tell the student what you will be doing. Ask him how he is responding to this procedure/medication and how it is managed at home.	Use developmentally appropriate language.
Establish a clean work area close to the student.	Sterile technique minimizes the risks of acquired infection.
Assemble your equipment, supplies and medication.	Follow student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.

Steps	Notes
Examine the solution and container for contamination or defects.	Obtain a new container of solution if problem suspected. Return questionable solution of IV supplier for proper investigation.
Examine the IV insertion site.	To assess for infiltration, inflammation or infection.
Examine the label to be sure solution and additives are correct.	Compare with written physician orders.
Clean the top of the container with alcohol wipe or appropriate disinfectant.	Make sure alcohol can safely be used on plastic container.
Clamp the tubing.	Keeps air out of the system.
Remove the tubing from the old bag or bottle.	If the tubing is to be replaced see procedure in this chapter.
Insert the tubing connector into the appropriate outlet of the new fluid container.	Observe sterile technique.
Suspend the container.	Use the height ordered, if any. Make sure the IV solution is above the level of the IV site.
Squeeze the drip chamber and release until it is half filled.	This keeps air out of the system.
Examine the tubing for trapped air and remove any air.	Insert needle with syringe into closest port below the air. Clamp tubing below the port. Withdraw fluid and air from the tubing with a syringe.
Adjust the rate of flow, usually with an infusion pump.	Volume per hour or drops per minute as ordered by the physician. See Flow Rate Factors, and Infusion Pump guidelines in this chapter.
Observe the student, the IV and IV site.	See examining the IV insertion site in this chapter.

Steps	Notes
Observe for signs of generalized infection, nerve damage from the IV board, circulatory overload, drug overload or reaction, superficial thrombophlebitis, air embolism.	Follow corrective measures outlined in student's health care action plan and school's emergency policies.
Document giving intravenous medication on the student's health record or medication and treatment logs.	Record the date and time; the amount and type of solution infused from the previous bottle (if any); the amount and type of solution and additives hung; location and condition of the IV insertion site; the student's tolerance and understanding of this procedure; any adverse reactions and what actions were taken.
==end==	==end==

CHANGING PERIPHERAL IV TUBING:

To prevent or minimize infection or sepsis related to the IV delivery system, and to remove all trapped air from the system.

Steps	Notes
Determine the need to change peripheral IV tubing at school.	Review the student's health care action plan and the physician's orders. The tubing should be changed at least every 72 hours for continuous infusions and at least every 24 hours for intermittent infusions AT HOME. The entire system will be changed immediately or discontinued (per physician's orders) if there is purulent drainage at the site, or if thrombophlebitis, cellulitis or IV related bacteremia is noted or suspected.
Provide a clean work area close to the student.	Follow sterile techniques.
Tell the student what you are doing.	Use developmentally appropriate language.
Assemble your equipment.	
Wash your hands.	Refer to Appendix B. Handwashing.

Steps	Notes
Using sterile technique, connect the filter and extension tubing (if any) to the new main IV tubing.	Use a 0.22-micron filter unless contraindicated to remove particles, bacteria and air from the IV fluid.
Clamp the new tubing.	
Examine the solution/medication for contaminants or defects.	Discard if problems suspected.
Clean the top of the bottle or bag with an alcohol wipe or appropriate disinfectant.	
Using sterile technique insert the tubing connector into the appropriate outlet of the infusion bottle/bag.	Squeeze the drip chamber while inserting.
Suspend the container.	Release the drip chamber.
Squeeze and release the drip chamber until half full.	Keeps air out of the delivery system.
Unclamp the new tubing and flush out the air; use gravity not a pump. Reclamp.	Do not let the drip chamber run dry.
Remove any air bubbles from the tubing.	Insert the needle of a 3 cc syringe into the port below the air. Clamp the tubing below the port. Withdraw fluid and air until all bubbles are gone.
Clamp the old IV tubing and disconnect it from the cannula.	
Connect the new IV tubing to the cannula or connect it to a small gauge needle and insert it into a buffalo cap on the insertion catheter.	Maintain sterile technique.
Secure with luer lok device and tape all connections.	Minimizes introduction of air and risk of infection.
Adjust the flow rate, usually with an infusion pump.	Volume per hour or drops per minute as ordered by the physician. Refer to Infusion Pump guidelines in this chapter.

Steps	Notes
Document changing the peripheral IV tubing on the student's health record or medication/treatment log.	Record the date and time the tubing was changed; the amount and type of solution infused; the amount and time of solution hung; the student's reaction to this procedure; any complications; any actions taken.
end	end

INTERMITTENT PERIPHERAL IV'S (INJECTION CAPS, BUFFALO CAPS, HEPARIN LOCKS).

To provide venous access when needed but not continuously while maintaining the system without contamination.

Steps	Notes
Determine the need to use intermittent peripheral IV's for medication at school.	Refer to the student's health care action plan and the physician's orders. These systems may be used for administration of medication and/or solutions by IV push or IV piggyback method. They are recommended when the student is susceptible to fluid overload or is very active and needs time unconnected from a continuous IV.
Examine the insertion site.	See procedure for examination of the IV insertion site in this chapter.
Add the IV medication/solution by: a) Use **piggyback** method or drip method. -OR-	a) See procedures for changing the IV bottle or bag, and for changing the peripheral IV tubing in this chapter.
b) Add the IV medication/solution by IV **push** method.	b) Follow guidelines immediately following to infuse a small amount of medication over a short period of time.
Wash your hands.	Refer to Appendix B. Handwashing.
Prepare syringes with medication, saline and heparin.	Follow physician's orders.
Cleanse the injection cap with alcohol or appropriate disinfectant.	

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Steps	Notes
Insert normal saline syringe into the injection cap and aspirate slightly.	To confirm placement of cannula in the vein.
Inject 1-1½ cc normal saline.	To flush heparin out of the cannula.
Remove the syringe and needle from the injection cap.	
Cleanse the injection cap with alcohol or appropriate disinfectant.	
Using the medication syringe and needle inject the medication through the stopper of the injection cap.	Duration of the injection should be the time period recommended by the drug manufacturer.
Remove the syringe and needle from the injection cap.	
Cleanse the injection cap with alcohol or appropriate disinfectant.	
Using the saline syringe, inject 1-1½ cc normal saline.	To flush the medication through the cannula.
Remove the syringe and needle from the injection cap.	
Cleanse the injection cap with alcohol or appropriate disinfectant.	
Using the heparin syringe, irrigate the cannula with the prescribed amount of heparinized saline.	Refer to physician's orders, and guidelines for cannula irrigation in this chapter.
Remove the syringe and needle from the injection cap.	
Again cleanse the injection cap.	
Observe the student for side effects.	Observe for at least 15 minutes.
Document the administration of IV infusion or IV push medication on the student's health record or medication/treatment log.	Record the date and time, the location and condition of the insertion site, the amount and type of medication or solution hung or infused, the duration for administering the medication, the student's reaction, any actions taken.

Steps	Notes
Inform the appropriate school staff of the potential benefits and side effects of the student's medication.	This allows the staff to plan to optimize the student's performance, and to report any reactions to the medication that they observe.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from receiving this medication at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CANNULA IRRIGATION:

To maintain and check patency of the cannula,
and to prevent clot formation at the end of the cannula.

Steps	Notes
Review the student's health care action plan and the physician's orders.	Irrigations are done as ordered and routinely after blood is drawn and/or after an infusion is administered.
Wash your hands.	Refer to Appendix B. Handwashing.
Prepare a syringe with heparinized saline.	Use the heparin solution ordered by the physician. 10 units of heparin/cc is recommended.
Clean the buffalo cap with alcohol or appropriate disinfectant.	
Insert the needle of the syringe into the center of the buffalo cap and inject the heparinized saline.	If the irrigation takes place after an infusion of a solution which is incompatible with heparin, the cap must be irrigated with at least 1 cc of normal saline before the heparin irrigation.
Remove the needle from buffalo cap.	
Clean the buffalo cap with alcohol or appropriate disinfectant.	
Document cannula irrigation on the student's health record or medication/treatment log.	Record the date and time, the location and condition of the insertion site, the amount and kind of irrigation solution(s) used, any reaction the student experienced and any actions taken.
end	end

INFUSION PUMP

Steps	Notes
Determine the need to use an infusion pump in the school setting.	Review the physician's orders and the student's health care action plan.
Verify type of pump to be used.	Peristaltic pump moves fluid by compressing the IV tubing; piston and cylinder pumps move fluid by pushing it through a cylinder.
Operate pump according to manufacturer's instructions.	Carefully review manufacturer's operating manual and instruction sheets when: a) assembling IV equipment b) initiating and maintaining the infusion c) before using an IV filter as some filters will cancel pump pressure or cause inaccurate rate. d) when checking pump parts e) when restarting or temporarily stopping the pump.
Regularly check the pump.	To verify the rate.
Regularly check the insertion site.	For infiltration.
end	end

DISCONTINUING IV THERAPY

Steps	Notes
Determine the need to discontinue the IV infusion at school:	Refer to physician's orders and student's health care action plan. Be sure they indicate when to discontinue IV therapy.
IV therapy completed Insertion site shows infiltration, inflammation/phlebitis, or infection.	Refer to Examining the IV insertion site guidelines in this chapter.
Wash your hands.	Refer to Appendix B. Handwashing.
Clamp the tubing.	
Determine the location of the needle or cannula.	

Steps	Notes
Loosen the dressing and tape from the site.	Use care not to disturb the needle or cannula. Have a second person stabilize the limb if needed.
Put on disposable gloves.	Refer to Appendix C. Handling Body Fluids.
Hold a gauze pad lightly over the insertion site while withdrawing the needle or cannula.	Do not use alcohol or disinfectant as it may cause unnecessary discomfort.
Inspect the needle/cannula to see that it is intact.	If any portion is missing, notify the physician immediately.
Apply and hold pressure on the insertion site.	Until the bleeding stops.
Apply a band-aid or pressure dressing if necessary.	To prevent renewal of bleeding.
Gently remove the remaining tape and restraints.	Have the student assist you as much as possible.
Discard needle/cannula and tubing in a puncture resistant, covered container. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Notify the parents and physician that the IV was discontinued.	Refer to physician's orders and student's health care action plan. **IVs ARE NOT STARTED NOR RESTARTED AT SCHOOL.**
Document discontinuing the IV on the student's health record or medication/treatment log.	Record the date and time; site IV was removed from; reason IV was discontinued; type, rate, and amount of infusion received prior to discontinuing; condition of the insertion site; condition of the needle/cannula; student's reaction to the procedure; notification of physician and parents; any problems and any actions taken.
end	end

GIVE INTRAMUSCULAR [IM] MEDICATIONS

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Intramuscular [IM] medication might be given by other trained school personnel in an emergency, such as severe allergic reaction (e.g., bee sting); otherwise, giving IM medication will not be delegated by the school RN.

REMARKS:
Requires prescription from physician.
Given only by school RN.
All medications given in school should follow the requirement in the Standards and Regulations for Schools passed by the Colorado Board of Health.

Appendix A

PROCEDURE

Definition: Administration of a medication to the student by injection into his muscle.

Purpose: IM injections are preferable to subcutaneous injections for irritating drugs, for doses greater then 1.5 cc (but less than 5 cc), and for a more rapid onset or greater pharmacologic effect. IM injections are preferable to IV injections for potent and toxic drugs and are used instead of IV injections for aqueous suspensions and for solutions in oil.

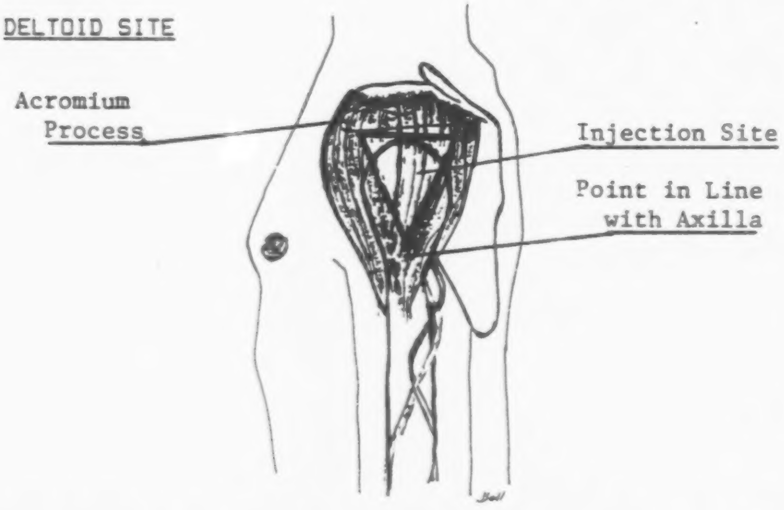
Equipment: Medication, appropriate sized syringe and needle, alcohol swab, covered punctured resistant container, plastic lined waste container.

Steps	Notes
Obtain the parent's written request and permission for medication.	Required by Colorado Standards, section 14.5 and 14.6.

Steps	Notes
Determine the need for taking medication at school.	Carefully review the student's health care action plan.
Obtain written authorization of a physician.	Required by Colorado Standards for prescription medication.
Have the medication provided by the parent in an individual pharmacy labeled bottle for the student who is to receive it.	Required by Colorado Standards for prescription medication.
Store medications at school at the correct temperature in a secure, locked, clean container or cabinet.	Required by Colorado Standards.
Develop a written practical plan to have the student take his medication at the date and time prescribed.	Regular administration protects acceptable blood levels of medication.
Keep a written record of medications given at school.	Required by Colorado Standards.
Establish a clean work area in the health room or classroom.	
Maintain as much privacy as possible.	Privacy will help the student relax. This is essential if the gluteus muscles are to be used.
Assemble the equipment and medication.	Review the student's health care action plan and the physician's orders.
Wash your hands.	Refer to Appendix B. Handwashing.
Using appropriate sized syringe and needle draw up the prescribed medication.	Use prescribed size, if any. In general, use a tuberculin syringe for accurate measurement of doses 1.0 cc or less. To determine correct needle size consider the student's age, muscle mass, nutritional status; and the drug's viscosity.

Steps	Notes
Draw up an additional 0.2 - 0.3 cc of air into the syringe.	This clears the needle bore of medication which could leak out through the needle before or during insertion. When the needle is inverted for injection the air bubble will rise to the plunger end of the syringe. Injecting this harmless air bubble will reduce the leakage of medication from the needle injection path.
Bring the student and the medication to the screened area.	
Explain to the student what you will be doing, that it may hurt, but you will do your best to help him minimize the pain.	Use developmentally appropriate language.
Wash your hands.	Refer to Appendix B. Handwashing.
Select the injection site:	Refer to student's health care action plan.

DELTOID SITE



Steps	Notes
Locate the densest area of muscle and avoid major nerves and blood vessels by identifying the lower edge of the acromium process and the point on the lateral arm in line with the axilla.	May be used for older, larger children. You should insert the needle 2-3 cm. deep at a right angle or point it slightly toward the acromium process.

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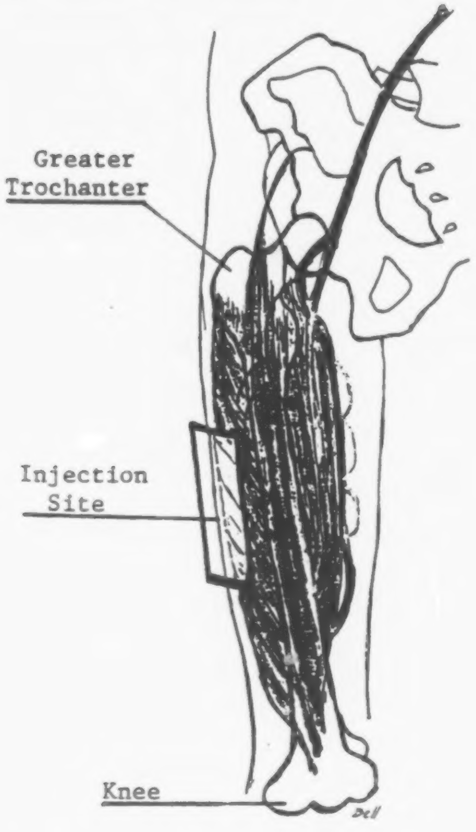
VASTUS LATERALIS SITE


Greater Trochanter
Injection Site
Knee

The lateral muscle of the quadriceps group can be used along the length of the muscle body, from a hand's breadth below the greater trochanter to a hand's breadth above the knee.

Do not use a needle longer than 1 inch.

You should insert the needle at an angle slightly toward the knee or at a right angle to the muscle.

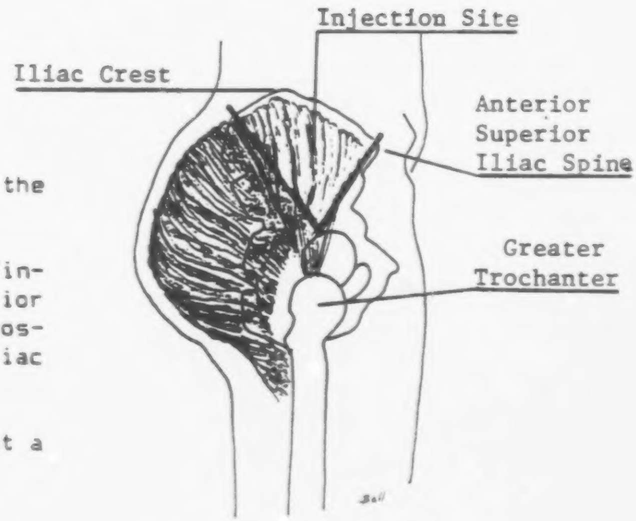
VENTROGLUTEAL SITE

Identify the greater trochanter of the femur with the heel of your hand.

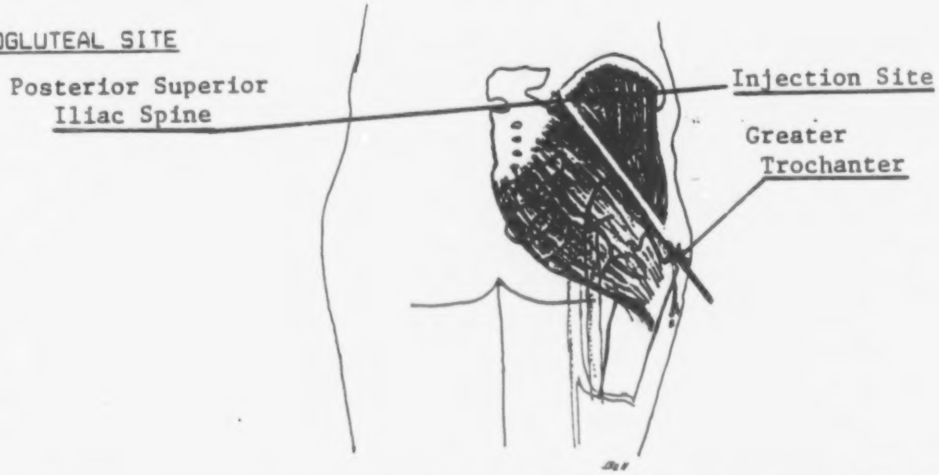
Then spread your index and middle fingers to form a V from the anterior superior iliac spine as far as possible posteriorly along the iliac crest.

You should insert the needle at a right angle to the muscle.

The site is in the V.


Injection Site
Iliac Crest
Anterior Superior Iliac Spine
Greater Trochanter

DORSOGLUTEAL SITE



The injection site is restricted to that portion of the gluteus medius above and outside the diagonal line drawn from the posterior superior iliac spine to the greater trochanter of the femur.

As the gluteal muscles do not develop until the child begins to walk they should not be used until he has been walking for 1 year or more.

The upper outer quadrant of the young child is smaller in diameter than that of the adult; therefore accuracy in determining this site is essential. You should insert the needle at a right angle to the muscle.

Steps	Notes
Position the student for comfort and relaxation of the muscles of the injection site.	A tense muscle will increase the likelihood of pain and bleeding from the injection.
Restrain the student if necessary.	Have adequate adult helpers if necessary to ensure the safety of the student.
Avoid extra-sensitive areas.	Roll the muscle mass under your fingers and look for twitching, which indicates an extra sensitive "trigger" area. Injection here may cause referred pain or a sharp pain, as if a nerve has been hit.
Numb the site if needed.	Hold ice on it for a few seconds.
Cleanse the injection site well with an alcohol swab.	Use a circular motion and move from the center outward to cover an area of 2 - 3 inches in diameter.

Steps	Notes
Allow the alcohol or other skin antiseptic to dry.	If the antiseptic is still wet, it will cling to the needle, creating pain when it reaches the sensory nerves of the subcutaneous tissues.
To reduce pain, use a new needle.	The point and bevel are dulled when they pass through the rubber stopper in a vial; dull needles cause more friction and pain. The old needle may have irritating medication adhering to its outer surface.
Insert the needle.	Through the skin into the muscle.
Aspirate gently to insure the needle isn't in a blood vessel.	Intramuscular solutions injected intravenously could be a danger to the student. If blood appears withdraw the needle and prepare another dose.
If no blood appears on aspiration, inject the medication at a slow, even rate.	This allows the medication to spread into the tissue under less pressure.
Withdraw the needle.	
Unless contraindicated, massage the relaxed muscle to distribute the medication better and increase its absorption.	This will reduce the pain caused by tissue stretching from a large-volume injection. Physical exercise of the injected muscle serves the same purpose.
The complication of fibrosis and contracture of the muscle can be diminished by massage, warm soaks, and range of motion exercises.	This disrupts and stretches immature scar tissue when multiple injections are being administered.
After the injection praise the student for his behavior even if he had trouble cooperating.	Allow him to express himself and regain his composure. He may wish to give a "shot" to a stuffed toy or doll.
Observe the student for possible side effects.	Review the pharmaceutical literature for each medication the student is receiving.

Steps	Notes
Have the student resume his scheduled classroom activity.	
Discard the used equipment.	Refer to Appendix C. Handling Body Fluids.
Document giving intramuscular medication on the student's health record or medication/treatment log.	Record the date and time of the injection; the medication and the dosage; the site used; the size of needle and syringe if needed; the student's reaction to the medication and the procedure; any actions taken.
Inform the appropriate school staff of the potential benefits and side effects of the student's medication.	This allows the staff to plan to optimize the student's performance and to report any reactions to the medication.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from receiving this medication at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
==end==	==end==

Z-TRACK TECHNIQUE:

Used for large volume injections and drugs that stain and irritate, such as iron preparations. Infrequently used with younger children.
ALWAYS USE THE GLUTEUS MUSCLE.

Draw up 0.1 to 0.2 cc of air into the syringe after preparation.

Change the needle to one that is 2 inches in length.

Displace the skin laterally away from the intended injection site.

Cleanse the site; introduce the needle at a right angle; aspirate to check for entry into a blood vessel; and inject the medication.

After injection is completed (including the air bubble), wait 10 seconds before withdrawing the needle; withdraw the needle.

Allow the retracted skin to resume its normal position; this prevents the medication from tracking up the needle line from one tissue layer to another.

Do not massage the injection site.

== end ==

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OXYGEN: PER MASK / PER CANULA

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Administration of oxygen will not usually be delegated by the school RN when there is evidence of increasing respiratory distress.

REMARKS:
Requires prescription from the physician.
Student and parent/guardian can inform school personnel of procedures used at home. Consider fire hazard in relation to smoking by students and/or staff.
Consider storage of equipment in relation to fire, tampering and theft.
Family provides equipment and supplies for the oxygen and for moving the oxygen.

Appendix A

PROCEDURE

Definition: **OXYGEN** is a colorless, odorless, tasteless gaseous element that is a component of earth's atmosphere and is essential for plant and animal respiration.

MASK is usually a clear plastic device that fits snugly over the student's nose and mouth used for the delivery of oxygen at high percentages, and to administer medication.

CANNULA is clear plastic tube with 2 protruding outlets which fit into the student's nose, held in place by an elastic band around his head, used to deliver oxygen.

TRANS-TRACHEAL OXYGEN is a relatively new procedure employing a clear plastic catheter inserted through a small surgical opening directly into the trachea which uses lower oxygen flow and provides improved oxygenation. Additional information is available from the respiratory therapist and/or the physician.

Purpose: To assist the student's respirations by relieving hypoxemia (reduced oxygen tension in arterial blood) and hypoxia (reduced oxygen availability to tissue cells); to deliver medication directly to the respiratory system.

Equipment: Oxygen source (gas cylinder, liquid oxygen reservoir, oxygen concentrator), reduction gauge, flow meter, humidifier with distilled water (if ordered), tubing, mask or cannula.

SAFETY CONSIDERATIONS

Steps	Notes
Be aware of the danger of fire whenever oxygen is in use.	Oxygen itself is non-flammable but an oxygen enriched atmosphere will increase the rate of combustion of a flammable material and will lower the kindling temperature.
Keep the student at least 4 to 6 feet from any open flame, source of high heat, substance that could generate a spark.	As above.
Post "CAUTION--Oxygen In Use NO SMOKING, NO OPEN FLAMES" in areas of the school used by the student and on the school bus near the doors.	Do not allow smoking near the student nor allow the student to smoke.
Do not use any oil, grease or petroleum based products on any equipment or near the student. Read the labels of all products.	These are highly flammable. Use cocoa butter or Aloe Vera products on the student's skin if needed rather than petroleum based lotion or cream.
Eliminate as many sources of static electricity as possible. Brush and comb hair when oxygen is off.	These include synthetic fibers in carpet and clothing (cotton is preferred). Certain sparking toys can be a hazard.
Eliminate antiseptic tinctures, alcohol, and ether in the immediate oxygen environment.	As above.
Make sure all electrical equipment in use near the student is properly grounded.	As above.
Keep the oxygen source secured in an upright position away from heat.	Liquid oxygen is easiest to transport, (especially when the student is in a wheelchair), but can cause frostbite on contact with skin. All requirement specified by the equipment manufacturer must be met.

Steps	Notes
Have a fire extinguisher readily available.	Know how to use it. Have it inspected and charged as recommended by fire regulations.
end	end

TYPES OF MASKS

Simple Face Mask With/Without Aerosol

It is used when the student requires a) oxygen with humidification, b) oxygen concentrations higher than those delivered by cannula, or c) aerosol therapy with oxygen.

Venturi Mask

Delivers oxygen to the student at precise concentrations between 24% and 40%. Humidity can be supplied.

Partial Rebreathing Mask

This mask has an inflatable bag that stores 100% oxygen and does not collapse even with deep inspiration. The student breaths from the bag and the mask.

Nonrebreathing Mask

Optimally, all the student's inspiratory volume is provided by the mask and bag which allows delivery of oxygen at nearly 100%.

Continuous Positive Airway Pressure [CPAP]

The mask has an inflatable cushion and head strap designed to tightly seal the mask against the face, a PEEP valve in the exhalation port to maintain positive pressure on exhalation, and uses high inspiratory flow rates to maintain positive pressure on inspiration.

OXYGEN PER MASK

Steps	Notes
Determine the need for the student to use oxygen by mask at school.	Review the physician's orders and the student's health care action plan.
Assess the student's respirations.	Determine rate, depth, effort including nasal flaring and/or substernal or intercostal retractions, noise, color, restlessness, level of consciousness.

Steps	Notes
Assemble the equipment near the student. Note: the student may come to school with the mask already in place.	Check the area for safety hazards.
Show the equipment to the student and tell him what you will be doing.	Use developmentally appropriate language.
If a bag is to be used, flush it with oxygen to inflate, and adjust the flowmeter.	As ordered; bag should not collapse during inspiration even with deep breath.
If a nebulizer is to be used, fill it to the appropriate mark and attach the large bore tubing from the mask to the nebulizer outlet.	Check physician's orders.
Set the oxygen concentration on the nebulizer bottle.	As ordered.
Adjust the flow rate to provide the desired mist.	As ordered.
Apply the mask to the student's face and adjust the straps.	The mask must fit securely and there must be no leaks. Pad the mask with cotton to prevent flow into his eyes.
Stay with the student for a time.	To make him comfortable and observe his initial reactions.
Remove the mask periodically.	Remove the mask only if his condition permits.
Dry his face and provide skin care.	Follow orders for skin care.
Assess the student's condition and the functioning of the equipment at regular intervals.	At least as often as ordered, usually hourly. Look for indications of hypoxia and hypoxemia.
Dry the mask and drain the tubing as moisture accumulates.	Condensation in the delivery system will block the flow of oxygen and alter concentrations.
Change the mask, tubing, nebulizer and other equipment exposed to moisture at least daily.	Contaminated equipment may be a source of infection. This is usually done at home.

Steps	Notes
Document administration of oxygen by mask on the student's health record or treatment log.	Record date and time the procedure was begun, length of time continued, the inspired oxygen concentration, whether humidity was used, the student's tolerance to the mask and oxygen, changes in respiration, changes in volume and tenacity of sputum produced.
Inform the appropriate school staff of the potential benefits and side effects of oxygen administration.	This allows staff to plan to optimize the student's performance and to report any reactions to the oxygen.
Summarize the student's use of and apparent benefit (or lack of benefit) from receiving oxygen at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

OXYGEN PER CANNULA

Steps	Notes
Determine the need for the student to receive oxygen by cannula at school. The student must be able to breath through his nose to benefit from a cannula.	Carefully review the physician's orders and the student's health care action plan.
Assess the student's respirations.	Determine rate, depth, effort including nasal flaring and/or substernal or intercostal retractions, noise, color, restlessness, level of consciousness.
Assemble the equipment near the student. Note: the student may arrive at school with the cannula already in use.	Check the area for safety hazards.
Show the equipment to the student and tell him what you will be doing.	Use developmentally appropriate language.
If a humidifier is ordered, make sure it is filled to the appropriate mark.	Humidity lessens the drying effect of oxygen.
Attach the connecting tube from the cannula to the humidifier outlet.	

Steps	Notes
Set the flow rate at the prescribed level.	Feel the oxygen flow from the cannula tips.
Place the tips of the cannula in the student's nares.	Tips should not extend more than 1 inch into the nares.
Stay with the student for a time.	To make him comfortable and observe his initial reactions.
Remove the cannula periodically.	Remove it only if his condition permits.
Clean his face and lubricate his nostrils.	Follow orders for skin care and nasal hygiene.
Assess the student's condition and the functioning of the equipment at regular intervals.	At least as often as ordered, usually hourly. Look for indications of hypoxia and hypoxemia.
Drain the tubing frequently.	Condensation in the delivery tube will block the flow of oxygen and alter concentrations.
Change the cannula, tubing, nebulizer and other equipment exposed to moisture at frequent intervals.	Contaminated equipment may be a source of infection. This is usually done at home.
Document the administration of oxygen by cannula on the student's health record or treatment log.	Record date and time the procedure was begun, length of time continued, the inspired oxygen concentration, the student's tolerance to the cannula and oxygen, changes in respiration, changes in volume and tenacity of sputum produced.
Inform the appropriate school staff of the potential benefits and side effects of oxygen administration.	This allows staff to plan to optimize the student's performance and to report any reactions to the oxygen.
Summarize the student's use of and apparent benefit (or lack of benefit) from receiving oxygen at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

MECHANICAL NEBULIZER

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Use of a mechanical nebulizer will not usually be delegated by the school RN when there is evidence of increasing respiratory distress or obstruction; or when there is need for medication.

REMARKS:
Requires prescription from the physician.
Student and parent/guardian can inform school personnel of procedures used at home. Parent/guardian provides equipment and supplies.
Consider availability of alternate power supply.
If medications are used refer to medication procedure.

Appendix A

PROCEDURE

Definition: **Nebulize** - to covert a liquid to a fine spray.
Mechanical Nebulizer - a device powered by either oxygen or compressed air that produces a stable aerosol of fluid particles.
Ultrasonic Nebulizer - a device with fluid in a chamber that is vibrated rapidly causing the fluid to break into small particles which are then carried by a flow of compressed air or oxygen to the student.

Purpose: To improve breathing by the administration of bronchodilators, mucolytics or other medications directly into the lungs by means of aerosol instillation; to provide an atmosphere of high humidity to assist the break up of pulmonary and bronchial secretions and aid the student in coughing them up.

Equipment: Air compressor or oxygen, oxygen nipple adapter, connection tubing, mechanical nebulizer manifold or ultrasonic nebulizer with cup and mask, medication or saline solution, suction equipment.

Steps	Notes
Determine the need for the student to use the nebulizer at school.	Refer to the physician's orders and the student's health care action plan.
Assess the student's respirations.	Establish a baseline for rate, depth, effort, noise, color, restlessness, level of consciousness.
When administering bronchodilators, monitor the heart rate before and after treatment by taking a pulse.	Bronchodilators may produce tachycardia, precordial distress, palpitation, dizziness, nausea, and excessive perspiration.
Assemble equipment and medication near the student.	As ordered.
Explain the procedure to the student.	Use developmentally appropriate language and demonstration as this therapy depends on the student's effort for effectiveness.
Wash your hands.	Refer to Appendix B. Handwashing.
Place the appropriate amount of medication and saline or water in the nebulizer.	Do not exceed the ordered amount.
Place the student in a comfortable sitting or semi-Fowler's position.	Expansion of the lungs and movement of the diaphragm are greatest in this position allowing for maximal treatment of the basilar areas of the lungs.
Have the student demonstrate mouth breathing. Have him practice if necessary.	Instruct and demonstrate as needed.
Attach the nebulizer hose to the air compressor or to oxygen and turn it on. A fine mist should be visible.	A flow rate of 5-6 to 8-10 liters per minute will provide a treatment time of about 8 to 10 minutes.
When using an ultrasonic nebulizer follow the instructions from the manufacturer.	Instructions vary. See physician's orders.
Have the student place the mouthpiece in his mouth, if possible.	Use a mask if he cannot use the mouthpiece.

Steps	Notes
Tell the student to breath in and out through his mouth.	Noseclips are sometimes used if he has difficulty breathing only through his mouth.
Every two minutes, or as ordered, have the student take an extra deep breath or two, hold his breath briefly, then exhale as slowly as possible. Resume normal breathing until time for next deep breaths.	This allows the medication to remain in the lungs longer, and facilitates dispersion of the particles.
Observe the student's chest expansion.	Deep breaths ensure the medication is deposited below the oropharynx.
If a cough occurs during the treatment, remove the mouthpiece or mask, allow the student to completely clear the secretions and then continue the treatment.	Turn off the machine when it is not being used by the student.
Give the student time to rest during the procedure if needed.	
Observe the student for any adverse reactions such as wheezing (bronchospasm) and excessive fluid deposition causing suffocation.	Wheezing indicates air turbulence and may result from the irritating effect of the medication on the airway or from inability to expectorate the loosened secretions. It may also indicate improvement of the air exchange when previously there was little air movement. The fluid may cause dried retained secretions to swell resulting the airway obstruction.
Use suction and postural drainage as needed.	
Continue the procedure until all the medication or fluid is nebulized.	Note the length of time for this.
After the treatment, have the student take several deep breaths, cough, and spit out the secretion.	Demonstrate if needed. Refer to Appendix C. Handling Body Fluids.
Wash your hands; have the student wash his hands.	Refer to Appendix B. Handwashing.

Steps	Notes
Document the use of the nebulizer, with or without medication, on the student's health record or treatment log.	Record date and time, the medication used, the duration of the treatment, the respiratory rate and effort, pre and post-treatment heart rate with bronchodilators, a description of the secretions expectorated.
Inform appropriate school staff of the potential benefits and side effects of using a nebulizer with or without medication.	This allows staff to plan to optimize the student's performance and to report any reactions to the treatment.
Summarize the student's use of and apparent benefit (or lack of benefit) from using a nebulizer at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CLEANING AND CARE OF THE NEBULIZER

After each treatment

Rinse the nebulizer, mouthpiece and/or mask under hot running water.
Shake off the excess water.
Lay these on a clean cloth or towel to air dry.
Cover the nebulizer parts with another cloth.
When dry, store in a clean plastic bag that can be closed (Ziploc, Baggie, etc.).
The tubing does not have to be cleaned but should be stored in the same bag.

Daily - Done At Home

After washing with prescribed cleansing agent, rinse in hot water, then place all parts, except the tubing, in a vinegar solution of one part vinegar to two parts water.
Allow parts to soak for 30 minutes.
The tubing should be washed and soaked about twice a week.
Remove the parts from the solution and rinse under hot running water.
Shake off excess water; attach tubing to the machine and run air through it.
Air dry and store as above.

When output from nebulizer appears decreased, unplug it and check the tiny opening in the lower half to see if it is clogged; if necessary, carefully run a safety pin through the opening a couple of times and rinse well.

Care of Nebulizing Machine

It will need minimal maintenance; follow manufacturer's manual.
Keep the machine clean and the air inlets free of dust or obstruction.

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TRACHEOSTOMY CARE and SUCTIONING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Tracheostomy care and suctioning will not usually be delegated by the school RN when there is evidence of respiratory distress during suctioning or evidence of bright red bleeding.

REMARKS:
Requires prescription from the physician.
Parent/guardian to provide equipment and supplies.

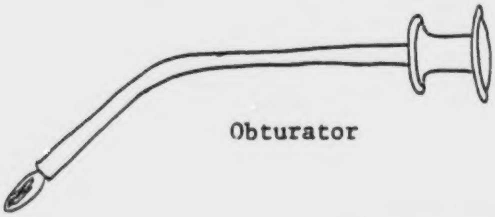
Appendix A

PROCEDURE

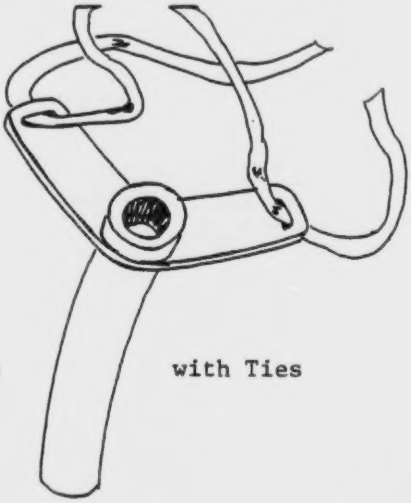
Definition: **Tracheostomy** is a surgical opening into the trachea through the neck to facilitate breathing.
Tracheostomy Tube is a single or double-walled tube (cannula) of metal or plastic inserted through the tracheostomy stoma and held in place with ties around the neck.
Suctioning is the act or process of clearing fluid or solids by mechanical suction.

Purpose: To maintain an open airway by keeping the cannula clear of secretions and exudate; to prevent infection; to minimize irritation of tissue around the stoma.

Equipment: See individual protocol.



Obturator



Single Cannula Tracheostomy Tube with Ties

SPECIAL NEEDS AND PRECAUTIONS FOR STUDENT WITH TRACHEOSTOMY

Safety: An extra tracheostomy set with obturator and ties must be with the student at all times.

Humidity: The tracheostomy bypasses the body's usual mechanism for moistening the air delivered to the lung. To compensate for this, the student may require additional humidity in the form of a mist collar (ultrasonic nebulizer) over the tracheostomy tube and increased fluid intake. If the physician orders the use of a mist collar, follow his instructions for use, care and cleaning.

A device to preserve the body's moisture is an artificial nose. This is a plastic T-piece with a folded 2x2 gauze pad which is attached to the plastic tracheostomy tube. The gauze acts as a filter for dust and large particles in the air, and holds expired moisture for rebreathing. If the physician orders the use of the artificial nose, follow his instructions for use, care and cleaning.

Traveling: When the student is away from the electric suction machine he may need to be suctioned with a DeLee mouth suction. This is not ideal and should not be used in place of the regular suction machine if it is available. If the DeLee suction is ordered by the physician, follow his instruction for use, care and cleaning. A bulb syringe may also be ordered for emergency suction; follow physician's orders for use, care and cleaning.

Clothing: The student must avoid clothing with high necks that could occlude the tracheostomy, and fabrics with fluff and lint that sheds. Plastic bibs are potentially a hazard to this student as they may occlude his airway. The ends of ribbons, and ties from bibs and hats should be fastened so that they cannot get near the tracheostomy tube.

Feeding: Do not feed the student lying down as he may aspirate. Be aware that toddlers and older children may experiment by putting food into the tracheostomy tube. Take steps to prevent this.

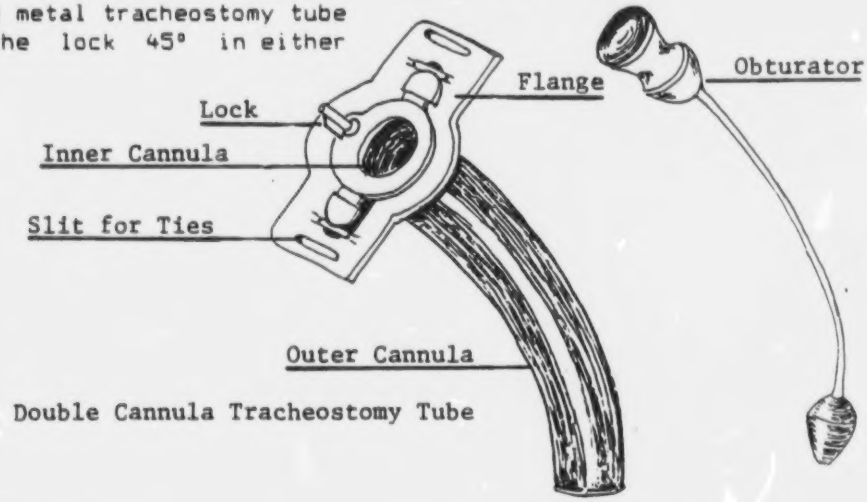
Water activities: Water must not get into the tracheostomy tube. Swimming, boating, playing near water, and bathing must be very closely supervised.

Play: Cover the tracheostomy tube with a cloth diaper or cloth bib (4x4) when out in the wind or dust. Do not allow the student to play in sand. Do not use sprays or powders near the student as they could be easily inhaled into the lungs. Do not allow the other students to touch or handle the tracheostomy. Make sure toys have no parts small enough to fit into the cannula.

CARE OF TRACHEOSTOMY TUBE AND STOMA

Steps	Notes
Determine what care is needed for this student with a tracheostomy while at school.	Observe the student's condition. Review the physician's orders and the student's health care action plan.
Note whether procedure requires sterile or clean technique.	Within schools most often this will be a clean procedure.
Wash your hands.	Refer to Appendix B. Handwashing.
Establish a clean work surface, such as a plastic backed disposable sheet on a table near the student, with as much privacy as advisable.	Do not take a student with a tracheostomy to an area of school where it would be difficult to summon immediate help if needed.
Gather the needed equipment.	Several unwaxed paper cups, cotton tipped applicators, hydrogen peroxide solution, pipe cleaners, disposable gloves, twill tape pre-cut as tracheostomy ties, skin ointments as ordered, sterile dressing if ordered, adhesive tape if needed for dressing, plastic lined waste container, paper towels, suctioning equipment and supplies, clean scissors, sterile saline and/or water.
Evaluate the student's condition and behavior to determine if the procedure can be done safely without assistance.	If he needs continuous oxygen, is agitated or restless, confused or frightened you will need assistance.
Tell the student what you will be doing.	Use developmentally appropriate language.
Set up your work area. Fill one cup with hydrogen peroxide, a second with sterile saline, a third with boiled water. Lay out the number of applicators, pipe cleaners, gauze pads you think you will need. Arrange the other supplies for easy access.	Keep the suction supplies separate.
Position the student to expose the tracheostomy area.	Elevate his torso slightly to keep cleansing fluids from migrating into the stoma. A small rolled towel placed under his shoulders will extend his neck.

Steps	Notes
If assisted ventilation will be needed during the procedure make sure your adult helper has been adequately trained.	
Wash your hands. Put on disposable gloves.	Refer to Appendix B. Handwashing and Appendix C. Handling Body Fluids.
Suction tracheostomy until clear.	See suction protocol this chapter.
Remove old tracheostomy dressing and discard in waste container.	Refer to Appendix C. Handling Body Fluids.
Determine if the inner cannula is to be removed. If not, go on to Care of the Skin.	Review the physician's orders. The inner cannula is removed at school only when there is a large amount of mucous in it or if it is plugged by mucous.
Using care not to jiggle the tracheostomy unnecessarily, unlock the inner cannula of the metal tracheostomy tube by turning the lock 45° in either direction.	Stabilize the outer cannula with your other hand.
Remove the inner cannula.	Use a slightly curved motion
Place the inner cannula in the cup filled with hydrogen peroxide.	Make sure it is completely covered.
Soak the inner cannula for about 5 minutes.	Peroxide will loosen the mucous.



Double Cannula Tracheostomy Tube

Steps	Notes
Remove the inner cannula from the peroxide and place it on a paper towel. Using two thickness of pipe cleaner, clean the interior of the inner cannula. Then clean the exterior.	
Place the inner cannula in the cup of saline to soak briefly.	
Remove the inner cannula from the cup and pour saline or water over and through it until it is clean and rinsed.	
Shake off excess moisture and place the clean inner cannula in a clean dry cup.	
Care of the Skin. Clean the skin around the stoma and under the tracheostomy tube with applicators or gauze soaked in hydrogen peroxide.	Using clean technique and working from the center outward cover an area about 1 inch beyond the tube. Check skin under the ties. Discard the applicator or gauze after one pass.
Rinse with water or saline on gauze or applicators.	As ordered; use same method.
Dry the area thoroughly with gauze or applicators.	Do not apply skin preparations or powders unless ordered.
Reapply gauze dressing, if ordered.	Use a tracheostomy dressing if available; or refold a 2x2 lengthwise with all raw edges inside, then fold it again to form an inverted u (∩) and slip it under the tracheostomy tube and around the stoma.
Suction the outer cannula if needed.	
Gently replace the inner cannula if it was removed and cleaned. Lock it in place.	Stabilize the outer cannula with your other hand.
Observe the student's ventilation and reattach the respirator if needed.	

Steps	Notes
Discard all used equipment appropriately.	Refer to Appendix C. Handling Body Fluids.
Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Reposition the student for comfort.	
Wash your hands.	Refer to Appendix B. Handwashing.
Return supplies and equipment to storage.	
Document care of the tracheostomy tube and stoma on the student's health record or treatment log.	Record date and time, solutions used, tenacity and amount of secretions, any problems, the student's response, who assisted you and why that was needed.
Inform appropriate school staff of the potential benefits and side effects of caring for the student's tracheostomy tube and stoma.	This allows staff to plan to optimize the student's performance and to report any reactions to the treatment.
Summarize the student's need for and benefit (or lack of benefit) from tracheostomy care given at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CHANGING TRACHEOSTOMY TIES

Steps	Notes
Determine the need for this procedure. **Changing the tracheostomy ties is not usually done at school.**	Refer to physician's order and student's health care action plan.
Note: Two people are required for this procedure; never attempt this alone.	To ensure the tracheostomy does not become dislodged.
Wash your hands.	Refer to Appendix B. Handwashing.
Tell the student what you will be doing.	Use developmentally appropriate language.
Provide a clean work area near the student.	

Steps	Notes
Gather your supplies: Tracheostomy ties (twill tape pre-cut to appropriate length with small lengthwise buttonhole slit at one end), clean scissors, clean hemostat or tweezers, disposable gloves, plastic lined waste container.	Always have operational suction equipment at hand.
Position the student to expose the tracheostomy area.	Use a small towel roll under the shoulders if needed.
Wash your hands; have your helper wash hands also. Both of you put on disposable gloves, if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Have helper stabilize the tracheostomy tube and restrain the student, if needed.	Hold tube securely by the edges. Do not occlude the airway. Observe for signs of respiratory distress.
Using hemostat or tweezers, thread the end of the twill tape with the slit through the flange hole on one side of the tracheostomy, bringing the tape through far enough to expose the slit.	Repeat procedure on the other side when the first side is complete.
Inserting the hemostat or tweezers through the slit, grasp the other end of the twill tape and pull it through the slit.	Adjust the ties so they are snug against the flange.
Bring the ends of the ties to the side of the student's neck and secure with a square knot.	Have the ties tight enough so that only the tip of one finger can be inserted between the ties and the neck.
Use the clean scissor to cut and remove the old ties.	Be sure you are cutting accurately.
Observe the condition of the skin under the ties.	Check for redness, infection, rash, etc.
Reposition the student for comfort.	
Discard the used ties. You and your helper remove and discard your gloves, if worn.	Refer to Appendix C. Handling Body Fluids.

Steps	Notes
You and your helper wash your hands.	Refer to Appendix B. Handwashing.
Observe the student's condition.	When appropriate, have the student resume his scheduled classroom activities.
Document changing the tracheostomy ties on the student's health record or treatment log.	Record the date and time, any problems, any actions taken, the student's tolerance of this procedure.
end	end

CHANGING THE TRACHEOSTOMY TUBE

Steps	Notes
In schools, this is done as an EMERGENCY PROCEDURE ONLY: tracheostomy plugged by mucous or tracheostomy dislodged.	Refer to the physician's orders and the student's health care action plan for details of that student's emergency protocol.
ALL STAFF working with this student should know how to replace or reinsert the tracheostomy tube.	Staff must receive adequate training.
Gather the needed equipment: suction equipment fully operational, replacement tracheostomy tube with ties attached, scissors, disposable gloves.	An extra tracheostomy set with obturator and ties must be with the student at all times.
Ask for assistance; NEVER ATTEMPT TO DO THIS PROCEDURE ALONE.	To restrain the student and provide oxygen if needed.
Position the student with the tracheostomy exposed.	Extend the neck if you can.
Take the new tracheostomy tube from its package holding it by the flanges. If it has an obturator leave it in place within the inner cannula.	Keep as sterile (clean) as possible. Obturator may make insertion easier.
Cut the old ties and gently remove the tube.	
Insert the new tube. Immediately remove the obturator, if any.	Use your index and middle fingers of one hand to stretch the skin of the neck and spread the stoma.

Steps	Notes
Hold the tube in place with slight pressure until the assistant can help you secure the ties.	Use a square knot at the side of the neck.
Suction if necessary.	Follow suction procedure in this chapter.
If you are unable to insert the tube, reposition the head and try again.	
If you remain unable to insert the tube, use a clean suction catheter to keep the airway open. HOLD IT IN PLACE DO NOT LET GO OF IT HAVE SOMEONE CALL 911	Follow school policy and student's emergency plan. or Call your LOCAL EMERGENCY NUMBER.
After the tube is inserted, observe the student's condition until stable; observe for bleeding at the stoma.	It is possible the tube may rapidly plug again if a lot of thick mucous is present.
Once stable, the student may resume his scheduled classroom activities.	
Document changing/replacing the tracheostomy tube on the student's health record or treatment log.	Record the date and time, the reason the tracheostomy tube was replaced, who assisted, what action was taken and the student's response.
Notify the student's parents and physician immediately.	Notify the principal.
end	end

SUCTIONING THE TRACHEOSTOMY TUBE

Steps	Notes
Determine need for suctioning the tracheostomy at school.	Note gurgly respiratory sounds, labored breathing, color changes, restlessness or sleepiness. Refer to physician's order and student's health care action plan.
Know whether this is to be a clean or sterile procedure.	Refer to physician's orders. Most frequently it is a clean procedure.
Have suction equipment operational at the student's side.	Check the equipment each morning to be sure it works.

Steps	Notes
Wash your hands.	Refer to Appendix B. Handwashing.
Provide a work area near the student.	Provide as much privacy as possible.
Connect the suction machine to the electrical wall outlet if not already done.	All plugs and outlet should be properly grounded.
Turn it on; then off.	To ensure it is working.
Tell the student what you will be doing.	Use developmentally appropriate language.
Wash your hands.	Refer to Appendix B. Handwashing.
Prepare the supplies for use: place a clean catheter, gauze pads, container of sterile saline on a clean surface.	Use sterile technique and supplies, if ordered.
Put on disposable gloves. Use sterile gloves if ordered.	They help protect both you and the student from infection. Refer to Appendix C. Handling Body Fluids.
Keep one gloved hand clean to handle only the catheter.	
Attach the suction tube to the suction catheter.	
Turn on the suction machine.	Procedure varies with equipment.
Have the student take some deep breaths.	Hyperoxygenate if ordered.
Suck a small amount of saline through the catheter.	This moistens the tip and confirms the equipment is working correctly.
Introduce the catheter through the tracheostomy tube opening, leaving the inner cannula in place. **DO NOT USE SUCTION WHILE INSERTING THE CATHETER.**	Insert it the length of the cannula plus ¼ to ½ inch more. Determine the length by previously measuring the cannula of the reserve tracheostomy tube.
Apply suction intermittently while withdrawing the catheter.	Use a rotating motion.
Do not have the catheter in the cannula longer than 5 seconds at a time.	The catheter occludes the student's airway.

Steps	Notes
Rinse the catheter.	Draw sterile saline through it.
Instill sterile saline drops into the trachea to thin secretions if ordered.	Never use water as it irritates the trachea.
Repeat suctioning.	Limit suctioning to the number of times prescribed or until the tracheal tube is clear of secretions, whichever is less.
Episodes of suctioning should not last more than 3 to 5 minutes.	Allow student to rest during the procedure.
If spontaneous cough is evoked, wipe secretions from surface and suction secretions from trachea.	
If you are unable to clear the trachea there may be a mucous plug.	Follow protocol of student's health care action plan to clear the plug.
Rinse the suction catheter thoroughly.	
Turn off the suction machine.	
Disconnect the suction catheter.	Discard it in the trash for sterile procedure; follow procedure to clean and reuse catheter for clean procedure.
Cover the end of the suction tubing with a 4x4 secured with a rubber band.	To keep it as clean as possible.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Reattach the student's oxygen and respirator if they were removed. Observe him until he is stable.	When stable the student may resume his scheduled classroom activities.
Document suctioning the tracheostomy tube on the student's health record or treatment log.	Record date, time, precipitating factors, type and amount of secretions obtained, any problems, student's reaction.

Steps	Notes
Inform appropriate school staff of the potential benefits and side effects of suctioning the tracheostomy tube at school.	This allows staff to plan to optimize the student's performance and to report any reactions from this treatment.
Summarize the student's need for and benefit (or lack of benefit) from tracheostomy suctioning at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CARE OF SUCTION EQUIPMENT

Suction Machine:

Daily - Remove the collection jar, rubber stopper and suction tubing.
Empty the jar into the toilet; rinse well.
Wash thoroughly in hot soapy water and dry.
Reassemble the equipment and test.
If the rubber stopper is not completely dry, it will not seal and will cause a leak in the system.

Weekly - Empty, wash and rinse as above.
Soak all equipment in vinegar solution (one part white vinegar to one part boiled or sterile water) for 30 minutes.
Rinse and dry.
Reassemble and test.

Suction Catheter:

After each use - Rinse the suction catheter thoroughly with tap water.
Place it in a jar containing vinegar solution (1:1 with boiled water) to soak until it is needed again.
Daily - Change the catheter and vinegar solution once every 24 hours.

Suction Tubing:

After each use - Rinse the suction tubing by suctioning tap water through the tubing.
Daily - Rinse the tubing with vinegar solution.

ORAL SUCTIONING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Parent/guardian to provide equipment and supplies.

Appendix A

PROCEDURE

Definition: Oral means of or pertaining to the mouth.
Suctioning is a method of removing fluid from an area by vacuum.

Purpose: To maintain an open airway through the mouth by removing excess secretions; to stimulate the cough reflex.

Equipment: Portable suction machine, suction catheter with vent, connecting tube, clean or sterile container for water or saline, sterile water or saline, tissues, sterile or clean towel, paper bag, disposable gloves, plastic lined trash container.

Steps	Notes
Determine the need for oral suctioning at school.	Observe the student for noisy, moist respiration with inability to cough adequately; auscultate his lungs. Review the physician's orders and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Gather your equipment.	Prepare a clean work area near the student.
Tell the student what you are going to do.	Use developmentally appropriate language.
Provide as much privacy as possible.	It may be possible to screen a section of the classroom.

Steps	Notes
Plug in the suction machine.	All outlets and plugs must be properly grounded.
Turn it on; then off.	Check to see if it is operational.
Arrange the equipment for use.	Open and place sterile (or clean) catheter, gloves and basin packets on the work area; pour sterile water into the basin.
Position the student on his side with his head lowered slightly if possible.	This position facilitates drainage of secretions.
You may need an assistant.	To help maintain the student's position and to administer oxygen if needed.
Wash you hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids. Gloves help protect both you and the student from infection.
Keep the gloved hand that will handle the catheter "clean".	To minimize contamination of the catheter.
Attach the suction tube to the catheter.	
Turn on the suction machine.	Switch placement may vary with each machine.
Suction a small amount of water through the catheter.	This lubricates the catheter and checks out the system.
Insert the catheter into the student's mouth without suction.	Area to suction include cheeks, under tongue, back of throat.
The catheter, even without suction, may stimulate the student's cough and gag reflexes.	Avoid overstimulating the gag reflex or the student may vomit.
Withdraw the catheter with a rotating motion while applying suction.	Produce suction by blocking the air vent with you thumb.
If the catheter "grabs", release the suction.	Avoid damaging mucous membranes.
Rinse the catheter in the basin of water by dipping in and out with suction on.	Removes secretions.

Steps	Notes
Repeat the suctioning procedure.	Suction 10 - 15 seconds at a time with 1 to 3 minutes rest between suctioning periods.
Allow the student to cough and rest as needed.	Prolonged suctioning can produce laryngospasm, profound bradycardia, and/or cardiac arrhythmias from vagal stimulation and loss of oxygen.
Rinse the suction catheter well. Turn off the suction machine.	
Detach the suction catheter from the tubing. Cover the end of the tubing in a clean towel or 4x4 secured with a rubber band.	Discard a disposable catheter; refer to Appendix C. Handling Body Fluids. Place a reusable catheter in a paper bag until you can clean it.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Reposition the student for comfort.	Give mouth care; refer to Chapter 13. Oral Hygiene.
Observe the student until his condition is stable. Watch his respirations and auscultate his lungs, if appropriate.	When respirations are improved student may resume his scheduled classroom activities.
Document oral suctioning on the student's health record or treatment log.	Record date, time, why the procedure was done, duration, type and amount of secretions, any bleeding, any problems, student's response to the procedure.
Inform appropriate school staff of the potential benefits and side effects of oral suctioning at school.	This allows staff to plan to optimize the student's performance and to report any reactions to the treatment.
Summarize the student's need for and benefit (or lack of benefit) from oral suctioning at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CARE OF SUCTION EQUIPMENT

Follow procedure described in Tracheostomy Care section of this chapter.

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POSTURAL DRAINAGE

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, occupational therapist, physical therapist, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Postural drainage will not usually be delegated by the school RN when there is evidence of increasing respiratory distress.

REMARKS:
Requires prescription from the physician.

Appendix A

PROCEDURE

Definition: **Postural drainage** means positioning the human body in prescribed postures that facilitate removal of secretions from the lungs by gravity.

Purpose: To supplement the action of the respiratory muscles to produce an effective cough and thus rid the airway of excessive, thick or sticky mucus.

Equipment: Pillows, tissues, emesis basin, plastic lined waste container, suction equipment if needed, slant board or folding cot if needed.

Steps	Notes
Determine the need for postural drainage at school.	Review the physician's orders and the student's health care action plan.
Assess the student's respirations.	Determine rate, depth, effort including nasal flaring and/or substernal or intercostal retractions, noise, color, restlessness, level of consciousness to provide a baseline for therapy.
Wash your hands.	Refer to Appendix B. Handwashing.

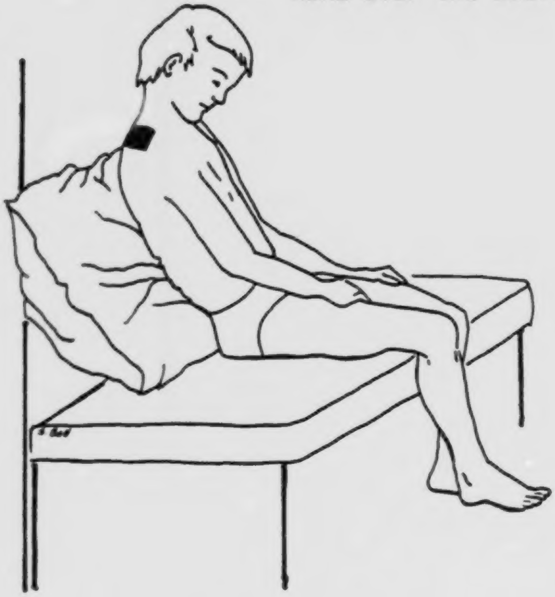
Steps	Notes
Tell the student what you will be doing and how he can help.	Encourage diaphragmatic breathing to help him relax and widen his airways. Use developmentally appropriate language.
Schedule the treatment before meals or 1½ to 2 hours afterward.	To minimize vomiting.
Provide privacy.	
Assemble your equipment.	
Make the student comfortable.	Loosen constricting clothing; listen to a story tape or relaxing music.
Assist with or administer prescribed nebulizer mist or medication.	To thin and loosen respiratory secretions; To minimize respiratory wall edema and dilate the bronchial tree.
Position the student in the prescribed postures (see following section).	These will vary with the area of lung involvement, age and weight of the child, assistive devices, recent surgery, general health status.
Keep the student's spine as straight as possible.	This allows optimal movement of the rib cage.
Use your lap and legs, pillows, slant board or cot to assist the student into position.	The lung segment to be drained should be elevated and that bronchus placed in a near vertical position.
Provide percussion and/or vibration as ordered.	See procedure following in this chapter.
Maintain the posture for the required duration.	As ordered; usually 1 to 3 minutes each.
Prompt the student to cough at the end of each required time.	Have him expectorate into a tissue or an emesis basin. Suction if needed or ordered.
Observe for signs of hypoxia, such as increased rate and depth of respirations, increasing pallor or cyanosis, slowing heart rate, limpness, fainting.	Allow the student to rest until his condition is stable.

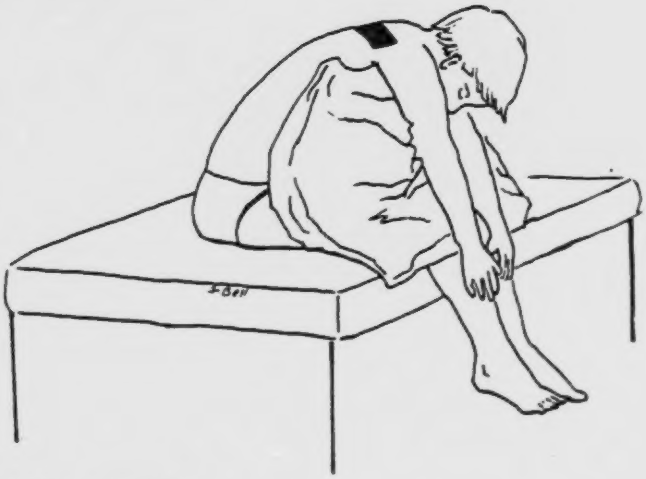
Steps	Notes
Make sure the student is safe at all times.	Do not leave him alone especially in the head down position.
Repeat until all prescribed postures have been accomplished.	The entire treatment should take 20 to 30 minutes.
When the treatment is completed, gently assist the student to resume his normal position.	He may experience some dizziness; do not leave him alone.
Reassess the student's respirations.	Compare your present assessment to you baseline findings to determine the effectiveness of the treatment.
Have the student resume his scheduled classroom activities.	When his condition is stable.
Discard the used tissues in the waste container. Empty and clean the emesis basin.	Refer to Appendix C. Handling Body Fluids.
Empty and clean the suction equipment.	Refer to Chapter 7. Suctioning, Care of Equipment.
Wash your hands.	Refer to Appendix B. Handwashing.
Document postural drainage on the student's health record or treatment log.	Record date and time, reason for treatment, duration, kind and amount of expectorated secretions, student's reaction, respiratory assessment and changes.
Inform the appropriate school staff of the potential benefits and side effects of postural drainage therapy.	This allows the staff to plan to optimize the student's performance and to report any reaction to the therapy that they observe.
Summarize the student's need for and apparent benefit (or lack of benefit) from receiving postural drainage at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

POSITIONS FOR POSTURAL DRAINAGE and PERCUSSION

Student Is Sitting Up

Position: Sitting, leaning slightly backward
Lung segment: Upper lobes, left and right anterior apical segments
Percuss: Over the top of the shoulder and anterior thorax; cupped hand over the clavicle.

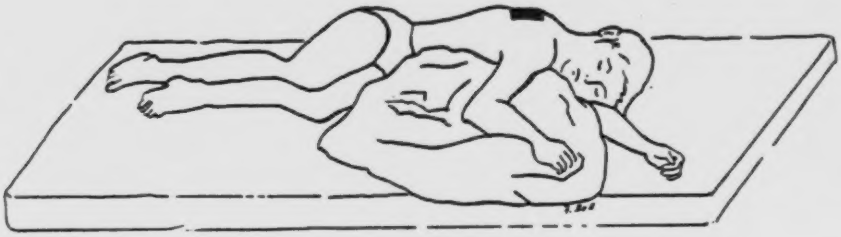




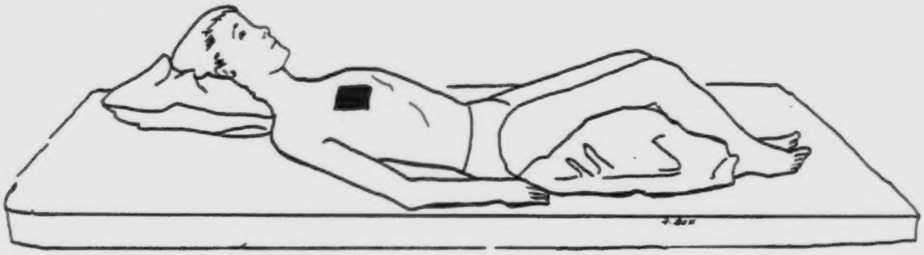
Position: Sitting, leaning slightly forward
Lung segment: Upper lobes, left and right posterior apical segments
Percuss: Over the upper posterior thorax; fingers over the top of his shoulders.

Student Is Lying Flat

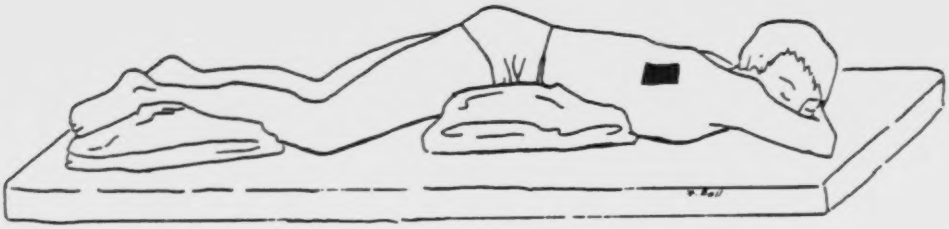
Position: Lying flat, and rotated onto the left side
Right side of torso and right arm elevated on pillows
Lung segment: Upper lobe, right posterior segment
Percuss: Over the right scapula.



Position: Lying flat on back, with pillow under head and knees
Lung segment: Upper lobes, left and right anterior segments
Percuss: The anterior chest between the clavicle and nipple areas
Precaution: Avoid direct pressure on the sternum.

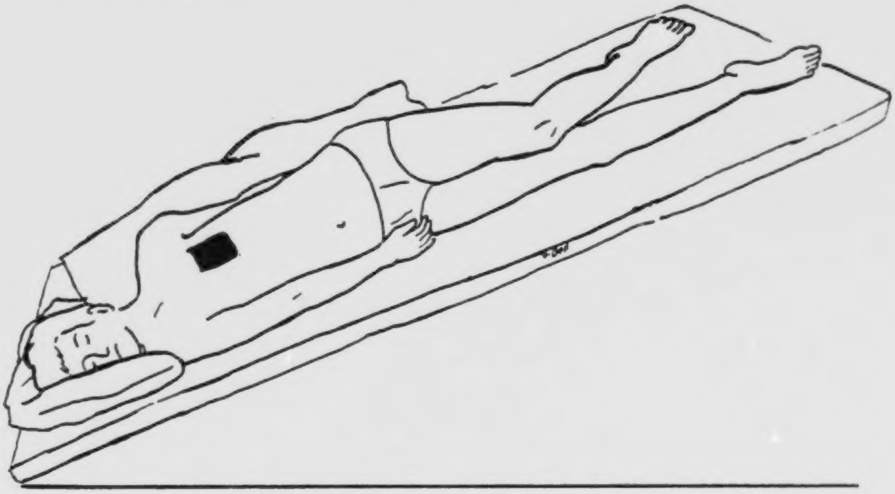


Position: Lying flat, prone with pillow under abdomen and ankles
Lung segment: Lower lobes, left and right anterior apical segments
Percuss: Below the inferior angle of the scapula.

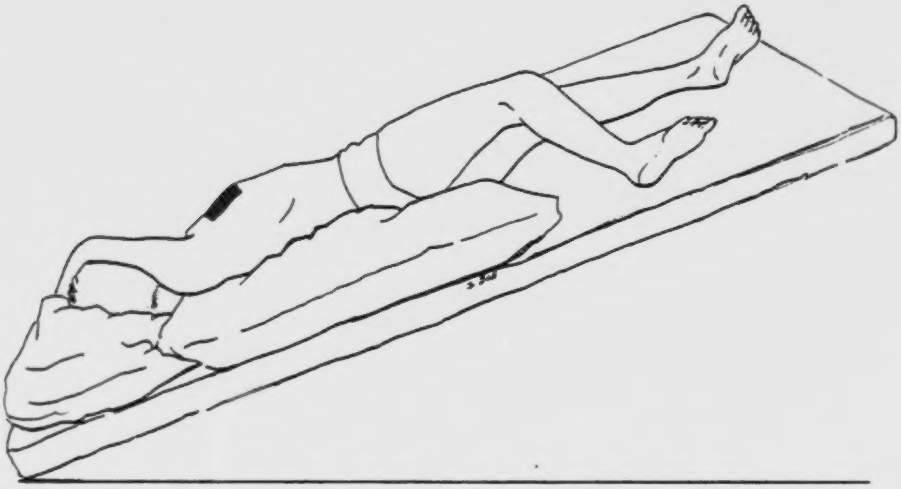


Student Is Lying With Head Down at 30°

Position: Lying on right side, rotated back one-quarter turn
Lung Segment: Upper lobe, lingular segment
Percuss: Over the left breast from left armpit to nipple area.

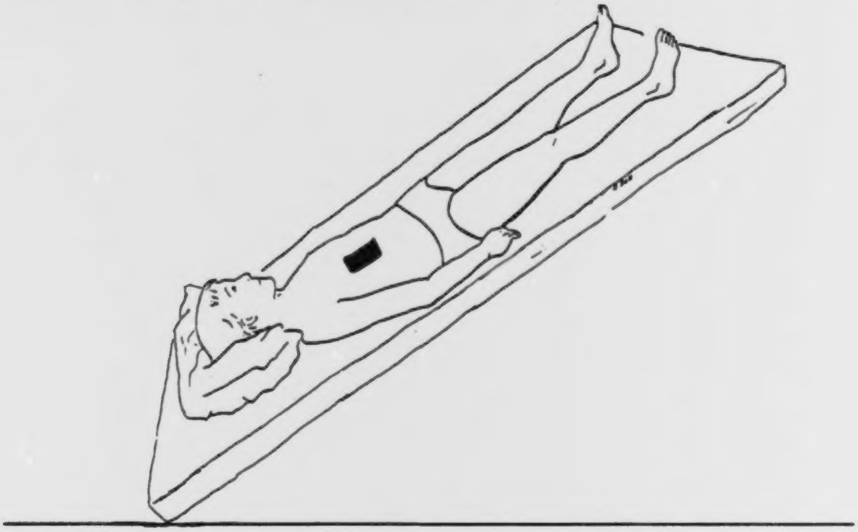


Position: Supine, rotated one-quarter turn onto left side
Lung Segment: Right middle lobe
Percuss: Over the right breast from the armpit to the nipple area.

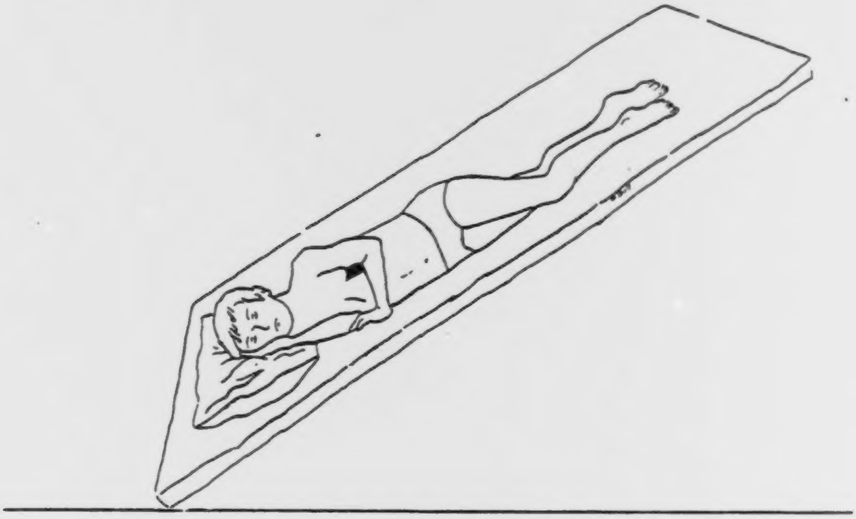


Student Is Lying With Head Down at 45°

Position: Lying on back
    Lung Segment: Lower lobes, left and right anterior basal segments
        Percuss: Slightly above the lower ribs.

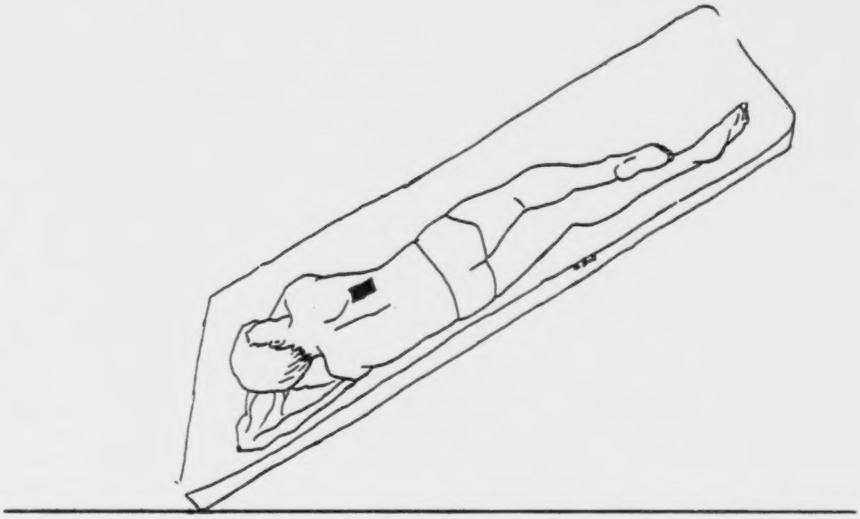


Position: Lying on right side
    Lung Segment: Lower lobe, left lateral basal segment
        Percuss: Left lateral thorax from beneath armpit to end of rib cage.

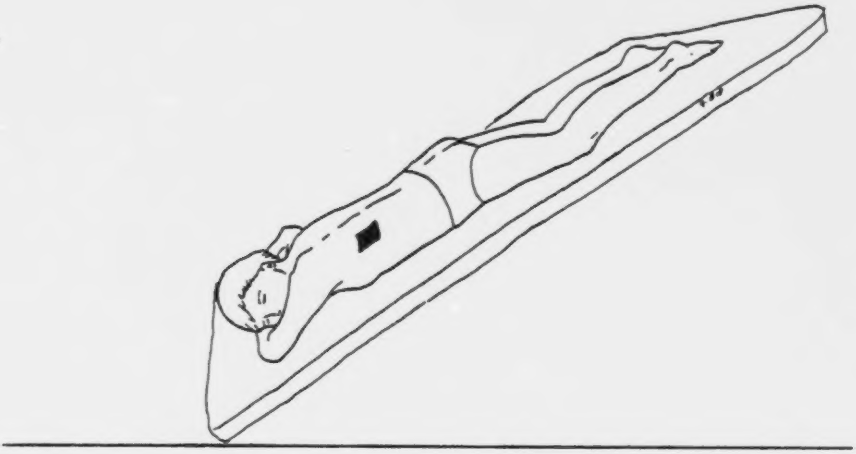


Student Is Lying With Head Down at 45°

Position: Lying on left side
Lung Segment: Lower lobe, right lateral basal segment
Percuss: Right lateral thorax from beneath armpit to end of rib cage



Position: Lying on stomach
Lung Segment: Lower lobes, left and right posterior basal segments
Percuss: Over lower chest area just above the 11th and 12th ribs
Precaution: Avoid the kidneys.



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GLOSSARY

anterior	front
apical	of the peak or highest point
basal	of the base or bottom
inferior	lower
lateral	side
lingular	tongue-like area near the heart
lobe	anatomical division of the lung
posterior	back
prone	lying horizontal with face down
segment	a section of a lobe
supine	lying horizontal with face up

PERCUSSION

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Percussion will not usually be delegated by the school RN when there is evidence of increasing respiratory distress.

REMARKS:
Requires prescription from the physician.

Appendix A

PROCEDURE

Definition: **Percussion** means to briskly clap or pat the chest using a cupped hand with relaxed and flexed wrists thus producing a hollow sound but no pain.
Vibration means to gently shake a person's chest during exhalation causing manual compression and tremor.

Purpose: To help loosen secretions lodged in the airway.

Equipment: A halved and padded bulb from an asepto syringe if needed for small child.

Steps	Notes
Determine the need for percussion at school.	Review the physician's orders and the student's health care action plan.
Assess the student's respirations.	Determine the rate, depth, effort including nasal flaring and/or substernal or intercostal retractions, noise, color, restlessness, level of consciousness to provide a baseline for this procedure.
Place the student in the appropriate postures.	Refer to Positions For Postural Drainage and Percussion in this chapter.

Steps	Notes
Protect the student's skin.	Place a diaper, towel or thin clothing without snaps or buttons over his skin.
Provide treatment in each posture for length of time ordered.	Usually 1 to 3 minutes.
Have student cough after each area is percussed.	
Check the skin for redness.	Stop percussion if the skin is more than pink.
Allow the student time to rest.	As needed.
At the completion of the treatment, reassess the student's respirations.	Compare the initial assessment with the present finding to determine the benefit of the treatment.
Have student resume his scheduled classroom activities.	When his condition is stable.
Wash your hands.	Refer to Appendix B. Handwashing.
Document providing percussion on the student's health record or treatment log.	Record date and time, purpose and result of treatment, any problems, student's response.
Inform the appropriate school staff of the potential benefits and side effects of percussion therapy.	This allows staff to plan to optimize the student's performance and to report any reaction to this procedure that they observe.
Summarize the student's need for and benefit (or lack of benefit) from receiving percussion therapy at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

SPIROMETER
(assisting deep breathing)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Assisting deep breathing will not usually be delegated by the school RN when there is evidence of increasing respiratory distress.

REMARKS:
Requires prescription from the physician.

Appendix A

PROCEDURE

Definition:	An instrument for measuring the volume of air entering and leaving the lungs.
Purpose:	To encourage achievement of maximum sustained inspiration and thus prevent or treat atelectasis (non-inflation of the lung).
Equipment:	Incentive spirometer with mouthpiece and tubing.

Steps	Notes
Determine the need for the student to use the spirometer at school.	Review the physician's orders and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Assess the student's respirations.	Determine rate, depth, effort including nasal flaring and/or substernal or intercostal retractions, noise, color, restlessness, level of consciousness to provides a baseline for treatment.

Steps	Notes
Arrange for privacy.	To help him attend to the task.
Tell the student what is expected of him and why it is important.	Use developmentally appropriate language and demonstration.
Have the student seated comfortably or in semi-Fowler's position.	This allows for maximum diaphragmatic movement, but the spirometer can be done in any position.
Set the spirometer tidal volume goal at the level prescribed by the physician.	Follow manufacturer's instructions to set the instrument.
Have student exhale fully.	
With the mouthpiece in place, have the student slowly inhale through the machine.	Noseclips are sometimes used.
At full inspiration, have the student hold his breath for 3 seconds.	This helps to open closed alveoli.
Have the student remove the mouthpiece, relax and slowly exhale fully.	A rate of 1 incentive breath per minute minimizes fatigue.
Have the student repeat this task for the number of times ordered by his physician.	Use the counter on the machine to keep track of his efforts.
Periodically increase the tidal volume goal as the student tolerates the procedure.	
At the end of the treatment interval have the student take a deep breath and cough.	Lung secretions may have been loosened during treatment and he may be able to cough them out into a tissue.
Again observe his respiratory effort and auscultate his lungs.	Note any changes from baseline.
Have the student resume his regularly scheduled classroom activities.	When his condition is stable
Clean the spirometer. Wash your hands.	Follow manufacturer's instructions. Refer to Appendix B. Handwashing.

Steps	Notes
Document use of the spirometer on the student's health record or treatment log.	Record date and time, any change or advancement in volume, effective cough, kind and amount of secretions, any problems, student's response to the procedure.
Inform the appropriate school staff of the potential benefits and side effects of using the spirometer.	This allows staff to plan to optimize the student's performance and to report any reactions to this procedure that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from using the spirometer at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

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EXTERNAL CATHETER

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

Appendix A

PROCEDURE

Definition: **External** means outside or exterior.
Catheter is a flexible tube to introduce or remove fluid.
External catheter is a condom type urinary collection device.

Purpose: To keep an incontinent male student's clothing dry; to obtain a urine specimen.

Equipment: Skin adhesive, adhesive remover, one-inch wide elastic non- irritating waterproof tape, condom-type urine collection device, scissors, paper towels, urinary drainage bag or leg bag without a flutter valve, soap and water, plastic lined waste container.

Steps	Notes
Note: **This procedure should routinely be done at home.**	The collection device should be changed every 48 hours and the penis exposed to air to lessen the damaging effects of moisture.
Determine the need for an external catheter to be applied at school.	Review the physician's orders and the student's health care action plan. External catheter might be applied if there was leaking from the one applied at home, or it unexpectedly came off.
Arrange for privacy.	Use a portable screen if available.

Steps	Notes
Tell the student what you are going to do and how he can assist you.	Use developmentally appropriate language.
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Gather your equipment.	Arrange it on a clean work surface near the student.
Position the student and assist him to undress to the extent needed for this procedure.	Protect the cot from urine. Anticipate his embarrassment. Use a drape or towel if necessary.
Remove old collecting device by clipping condom and tape near the base of the penis and gently pulling them off.	Student can assist with this if he is able.
Examine the skin of the penis for signs of irritation.	If irritation exists, do not apply new collecting device. Student may have to wear disposable diaper until area heals. Inform parents and physician.
Remove all old adhesive from the penis or the new condom will not adhere.	Use adhesive remover if needed, but do not leave it on the skin.
Wash the penis and perineal area with soap and water; rinse well. Dry thoroughly, but do not rub the skin.	To lessen skin irritation, odor and infection.
Rewash your hands.	Refer to Appendix B. Handwashing.
Prepare the drainage or leg bag.	A flutter valve is ill-advised because it does not allow the urine to enter the bag fast enough. This can cause backpressure in the system and the condom could rupture.
Drape the pubic area with paper towels.	A drape can be made by cutting a small hole in a towel and sliding it over the penis.
Place the new collecting device over the glans of the penis, leaving a space between the drainage end of the device and the end of the penis.	A ½ to ¼ inch space will diminish irritation and allow for expansion of the erect penis.

Steps	Notes
Apply skin adhesive to the penile shaft while holding the condom in place over the glans.	Follow directions on the adhesive. Condom keeps adhesive off glans and paper drape keeps it off pubic hair.
Unroll collection device along the penile shaft and secure it in place with a strip of 1 inch elastic non-irritating waterproof tape. Leave ¼ inch between the tape ends.	Do not overlap the tape as that might reduce blood supply to the penis causing necrosis. Do not cover the condom ring.
Secure the elastic tape ends with a short piece of surgical adhesive.	Placed across the ¼ inch gap.
Carefully cut off the condom ring.	If left in place the ring could be the source of a pressure area.
Attach the drainage tube securely to the reservoir. Secure the tubing to the thigh if needed to keep it from twisting.	Allow for the student's usual activities.
Assist the student to redress.	When ready, have the student resume his scheduled classroom activities.
Dispose of used collection system. Wash scissors. Store supplies in convenient area.	Refer to Appendix C. Handling Body Fluids.
Discard disposable gloves if they were used. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document applying/changing an external catheter on the student's health record or treatment log.	Record date and time, reason for the procedure, skin condition, student's reaction.
Inform appropriate school staff of the potential benefits and side effects of applying/replacing an external catheter.	This allows the staff to plan to optimize the student's performance and to report any reactions to this procedure that they observe.
Summarize the student's meed for and apparent benefit (or lack of benefit) from applying/replacing an external catheter at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CLEAN INTERMITTENT CATHETERIZATION

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Clean intermittent catheterization will not usually be delegated by the school RN when there is evidence of infection, pain, bright red bleeding, inability to insert catheter.

REMARKS:
Requires prescription from the physician.
Parent/guardian provides equipment and supplies.

Appendix A

PROCEDURE

Definition: **Clean Intermittent Catheterization** is the periodic emptying of urine from the bladder by means of a straight catheter.

Purpose: To remove urine from the bladder; to decrease the frequency of urinary tract infections; to minimize incontinence; to establish a bladder training program; to avoid the use of an indwelling catheter; to foster independence.

Equipment: Catheter as prescribed by physician, mirror, lubricating jelly if ordered, cotton balls or 4x4s or towelettes, container for urine if needed, storage containers for catheters (marked clean and dirty), storage container for supplies, plastic lined waste container.

Steps	Notes
Determine the need for clean intermittent catheterization at school.	Review the physician's orders and the student's health care action plan.
Note: An extra set of equipment should be kept at school.	

Steps	Notes
Arrange for privacy.	Student may need permission to use a restroom with doors and available soap.
Arrange for student to leave scheduled class activities each day.	Student may need a pass or permission to be tardy.
Tell the student what you will be doing and how he can assist.	Usually, the goal is for the student to achieve independence in performing this procedure competently.
Wash your hands and have the student wash his hands (assist if needed). Put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Gather the equipment.	
Assist the student to remove clothing as needed.	Encourage him/her to choose clothing that can be managed independently.
Have the student to attempt to void.	
Position the student on the toilet. It may be easier for the student to sit facing backwards or stand with one foot on the toilet edge.	Use the toilet if the student can safely maintain a sitting position.

Steps FEMALE Student	Steps MALE Student
If unable to use the toilet she should lie down with her feet flat on the cot and her knees slightly apart, and her head elevated sufficiently so she can see what she is doing.	If unable to use the toilet he should sit on a chair or cot.
Place an absorbent pad under her hips and thighs if needed.	Place an absorbent pad under his hips and thighs if needed.
Hold or position a mirror so she can identify the anatomical landmarks needed.	Obese male may also benefit from a mirror.
Wash perineal area with soap and water on cotton balls or 4x4s, or use towelette.	If uncircumcised retract the foreskin. Wash the tip of the penis with soap and water or a towelette.

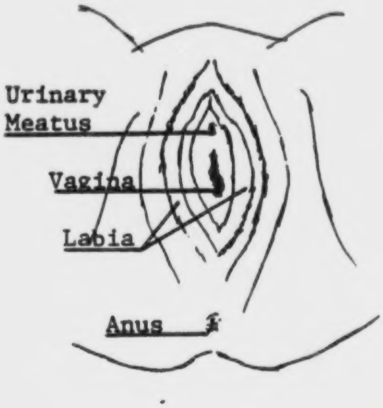
Steps

FEMALE Student

Use a downward stroke to prevent contamination from the rectum; discard into toilet or trash after one sweep.

Position the urine collection container between her thighs if she is not on the toilet.

Take the catheter out of the storage container and hold it about ½ inch from the tip.
Lubricate tip with water soluble lubricant if needed.



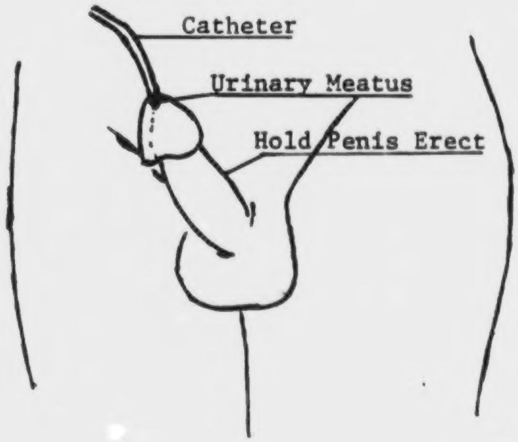
Have her locate the meatus with her free hand.
Gently insert the catheter 2 to 3 inches until urine flows.

Steps

MALE Student

Position the urine collection container within easy reach if he is not on the toilet.

Take the catheter out of the storage container and lubricate it from the tip along 2 inches of the tube with a water soluble lubricant.
Then hold the catheter about ½ inch from the tip.



With his free hand have him hold his penis erect and gently insert the catheter into the urethra until urine starts to flow; the insert another inch.
Some resistance may be felt as the catheter passes the sphincters; slightly increase the traction on the penis and use gentle but firm pressure on the catheter to continue.

Steps	Notes
MALE or FEMALE	MALE or FEMALE
Place the open end of the catheter into the collection container or the toilet.	
Leave the catheter in place until urine ceases to flow.	Changing position or straining may make more urine flow.
Remove the catheter slowly. Pause if more urine flows.	Continue removing the catheter when the flow ceases.
Clean the perineal area with soap and water or a towelette to reduce odor; rinse with water and dry thoroughly.	Residual soap is irritating to the perineum.
Empty urine container into toilet if needed.	
Have the student wash the catheter between soapy hands; rinse it well; replace it in the storage container.	If there are inadequate facilities for washing the catheter it may have to be placed in the "dirty" storage container and cared for later. The student would have to wash his hands with a towelette.
Help student get dressed, if needed.	
Have the student finish washing his hands. Remove and discard your gloves if used. Wash your hands.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Have the student resume his scheduled classroom activities.	When he is ready.
Document the catheterization on the student's health record or treatment log.	Record date and time, approximate amount and color of urine, problems encountered, student's reaction and ability to perform this procedure.
Inform appropriate school staff of the potential benefits and side effects of intermittent catheterization.	This allows the staff to plan to optimize the student's performance and to report any reactions to this procedure that they observe.

Steps	Notes
Summarize the student's need for and benefit (or lack of benefit) from having clean intermittent catheterization performed at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

Care of Catheterization Equipment

Daily Catheter Care

Wash the catheter with liquid soap and warm water each evening. Use a syringe to flush soap and water through the catheter. Wash the plastic carrying case as well. Rinse thoroughly.

Prepare a solution of white vinegar and water mixed 1:1. Flush the catheter with this solution. Then rinse the catheter and carrying case in this as well.

Leave the catheter and carrying case to air dry through the night. In the morning put them into a new sealable plastic bag along with the supplies needed for the day.

Replace Catheter

A catheter will last approximately two months given the above care. Replace the catheter when it looses it elasticity, becomes stiff, or badly discolored.

CREDE METHOD

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Requires prescription from the physician.
Student and parent/guardian inform school personnel of procedures being used at home.

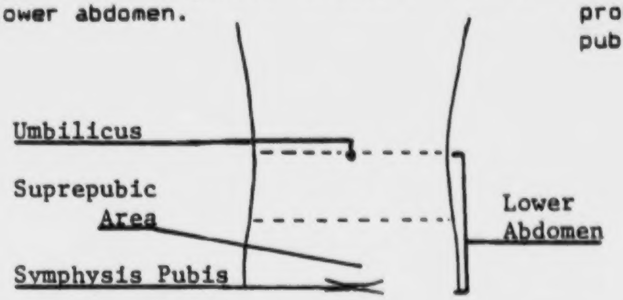
Appendix A

PROCEDURE

Definition:	A method of applying manual pressure over the lower abdomen to compress the bladder and expel urine.
Purpose:	To reduce residual urine in the bladder; to lessen incontinence; to decrease reoccurrence of bladder infection.
Equipment:	None

Steps	Notes
Verify the need for using Credé method of voiding at school and at what intervals it should be done.	Review the physician's orders and the student's health care action plan.
Assure the student of relative privacy in the classroom or restroom.	
Tell the student what you will be doing.	Use developmentally appropriate language and demonstration.
Whenever possible, instruct the student to do the procedure himself.	Refer to physician's orders.
Wash your hands; have the student wash his if he is participating.	Refer to Appendix B. Handwashing.
Position the student lying down, or sitting on a chair or the toilet.	The student may be incontinent and diapered, wear an external condom collection device, use a urinal or bedpan, be using intermittent

Steps	Notes
	catheterization, transfer from a wheel chair to toilet, or be ambulatory.
Apply firm, gentle pressure to the lower abdomen.	Begin just below the umbilicus and progress downward toward the symphysis pubis (pubic bone).



Steps	Notes
Use firm and repeated inward and downward pressure over the suprapubic area (area above pubic bone).	Use one or both hands depending on the size of the student or as ordered. The heel of the hand may be more effective.
Continue the maneuver as long as urine can be expressed.	Be careful not to injure the student with long fingernails.
Incorporate this procedure into the student's routine bladder care.	Encourage student and family to do likewise.
Wash your hands; have the student wash his hands.	Refer to Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	
Document using Credé method of voiding on the student's health record or treatment log.	Record date and time, who performed the maneuver, the amount of urine obtained, any problems, the student's understanding and ability to do this independently.
Inform appropriate school staff of the potential benefits and side effects of using the Credé method of voiding.	This allows the staff to plan to optimize the student's performance and to report any reactions to this procedure that they observe.
Summarize the student's need for and benefit (or lack of benefit) from using the Credé method at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
═end═	═end═

INDWELLING CATHETER
(care of external equipment only)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Care of an indwelling catheter will not usually be delegated by the school RN when there is evidence of infection, displacement or obstruction of the catheter.

REMARKS:
Parent/guardian to provide supplies and equipment.

Appendix A

PROCEDURE

Definition: An **indwelling catheter** or retention catheter is inserted into the bladder to provide urinary drainage over a period of time from hours to weeks. It is attached to a closed drainage and collection system.

Purpose: To empty the bladder of urine as it accumulates; to minimize residual urine; to decrease incidence of bladder infection; to control incontinence.

Equipment: Urinary collection system as ordered.

Steps	Notes
Determine the need for caring for external equipment of an indwelling catheter at school.	Review the physician's orders and the student's health care action plan.
Observe the student's condition and ask him how he feels.	If he is restless or uncomfortable and says that his bladder feels full, the catheter or drainage system may not be working.

Steps	Notes
Care of the Drainage System	
Maintain privacy.	
Check the drainage tubing for loops, kinks or compression.	Straight drainage means that the tubing from the cot or chair to the collecting bag must be straight and all other tubing must be kept above this level. The catheter should be secured to the student's inner thigh by tape or a strap.
Check the height of the drainage bag.	Make sure it is always below the level of the urinary bladder.
Observe the catheter, tubing and cot or chair for moisture.	The collecting system may leak or the student may be voiding around the catheter.
Note the level of urine in the collecting bag.	The level of urine should rise gradually over time. If the level does not rise, the catheter may be blocked or the student dehydrated.
Wash your hands; put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
When changing or emptying the bag cover the exposed ends of the tubing with 4x4s secured with rubber bands.	Prevent contamination of the system.
Empty the collection bag or assist the student to empty it himself.	Do this as often as needed or as ordered.
Note the color, clarity and odor of the urine. Measure if required.	Refer to physician's orders or health care action plan to determine if measured intake and output are required.
Discard and replace the collection bag or clean and reuse it.	Follow student's health care action plan and refer to Appendix C. Handling Body Fluids.
When reattaching the leg bag or drainage bag, wipe the attachment tube openings with alcohol before inserting into the catheter.	

Steps	Notes
Personal Care of the Student	
Assure privacy.	Screen the student.
Gather your equipment: disposable gloves, warm soapy water, disposable washcloth (Handiwipe, etc.), warm rinse water, disposable towel, plastic lined waste container.	Refer to student's health care action plan.
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Tell the student what you will be doing.	Use developmentally appropriate language.
Position the student.	Expose the catheter and the urinary meatus.
Stabilize the catheter with one hand while washing the area gently with the other.	Do not pull on the catheter.
Observe the meatus for signs of irritation.	Look for redness, swelling or discharge.
Cleanse in a circular pattern from the meatus outward.	Do not introduce soil from the anal region.
Rinse and dry using the same procedure.	
Apply skin care products only as ordered.	See physician's orders.
Empty the basins. Discard the washcloths and towels.	Refer to Appendix C. Handling Body Fluids.
Position the student for comfort.	Have the student resume his scheduled classroom activities.
Clean your equipment. Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids. Refer to Appendix B. Handwashing.

Steps	Notes
Document care of the drainage system and/or personal care of the student with an indwelling catheter on the student's health record or treatment log.	Record the date and time, any problems with the urinary drainage system, amount and color of the urine, condition of the meatus and skin, student's reaction to and participation in the procedures.
Summarize the student's need for and benefit (or lack of benefit) from having care of the external equipment for his indwelling catheter done at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

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BEDPAN and URINAL

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Assisting with use of bedpan and urinal will not usually be delegated by the school RN when there is evidence of infection and/or skin breakdown.

REMARKS:
Appropriate equipment must be available.

Appendix A

BEDPAN

Definition:	A metal, ceramic or plastic receptacle for collecting the urine and/or bowel movements of a person who is unable to use a toilet or commode.
Purpose:	To assist the student with regular evacuation of bowel and bladder.
Equipment:	Disposable gloves, warm bedpan, bedpan cover, bell or call system, toilet paper, equipment for handwashing, cot protector, newspaper to protect the furniture.

Steps	Notes
Determine the need for the student to use a bedpan at school.	Review physician's orders and student's health care action plan.
Provide privacy for the student.	Privacy aids relaxation and assists evacuation of bowel and bladder.
Assemble the necessary equipment. Have the student wash his hands. Undress the student as needed.	Powder on the bedpan rim, or a pad between buttocks and bedpan will increase comfort and help prevent skin irritation.
Wash your hands. Put on disposable gloves, if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.

Steps	Notes
Have the student lie on his back with knees flexed. [With a helpless student, turn him on his side facing you. Place a large pillow lengthwise against his back from the shoulders to the upper buttocks; place a second large pillow lengthwise from his thighs to his feet, building a platform on which he can be placed.]	Allow the student to assist with as much of the procedure as possible. Steps for a helpless student are in brackets [ ].
If the student will be using the bedpan in his wheelchair, assist him to stand or lift him from the chair.	This may require an assistant or the use of a grab bar, trapeze, etc. for safety.
Place protector on the cot or chair under student's hips, protecting the ends of the pillows if appropriate.	
Place bedpan on the wheelchair seat or on the cot beside the student, with the open end toward the foot of the cot. [With a helpless student, place the bedpan on edge against his buttocks, as close to the desired position as possible.]	Hold the bedpan at the side or back to avoid handling the open end and thus soiling your hands.
Assist the wheelchair student to sit on the bedpan.	Be sure he has a safety restraint on, if needed, and his feet are supported.
For the student on a cot, place one of your hands under the small of his back. On signal, help him lift his hips. With your other hand, slip the pan under his hips.	If the student has strength in his arms, he can help lift himself by using a trapeze bar above the cot.
[With a helpless student, press downward with the bedpan on the cot and hold it in place as a helper turns the student onto the bedpan and the platform of pillows.]	Check to see that the bedpan is properly adjusted.
Raise the student to a sitting position if allowed, with supports at his back. Drape him for privacy.	Sitting is a natural position for voiding or for having a bowel movement.

Steps	Notes
Put toilet paper where the student can reach it. Make sure that a bell or calling device is within easy reach.	So that the student can let you know when he is finished.
Leave the area to give the student privacy unless he should not be left alone.	Do not leave the student on the bedpan any longer than is necessary.
If the student is unable to clean himself, use the toilet tissue or a warm moist washcloth to clean him. Place soiled tissue in the pan, unless you are collecting a specimen.	Wipe female students from front to back to avoid bring soil from the rectum to the vaginal/urethral area.
For the student in a wheelchair lift him off the bedpan or assist him to stand.	This may require an assistant or the use of a grab bar, trapeze, etc. for safety.
When the student is finished, place your hand under the lower part of his back to help him raise off the pan and lift his hips so that the pan does not pull against his skin. Remove the bedpan and set it on a protected surface. Cover it.	Use newspaper to protect furniture from moisture and spills. Cover the bedpan with newspaper or a disposable bedpan cover.
[With a helpless student, hold the bedpan flat on the cot to avoid spilling the contents, while the helper rolls the patient off the platform of pillows onto his side.]	
Remove the cot protector and redress the student.	Make sure his clothes are neat and unsoiled.
Allow the student to wash his hands and help him to get into a comfortable position on a cot or in his wheelchair.	Use a towelette or warm soapy washcloth if student cannot be brought to a sink. Rinse and dry hands.
Take the bedpan to the bathroom. Note the appearance of urine and/or stool. Empty the contents into the toilet.	If the student is on recorded intake and output, measure the urine.
Clean the bedpan: In not already wearing gloves, wash your hands and put gloves on now.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.

Steps	Notes
Rinse the bedpan with cold water, loosening any remaining content from the sides. Use hot, soapy water and a toilet brush to cleanse thoroughly. Disinfect. Rinse well and dry.	
Cover the bedpan and store it appropriately.	
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document assisting the student to use a bedpan on the his health record or treatment log.	Record date and time, description and amount of urine and stool if needed, any problems, student's reaction to this procedure.
end	end

URINAL

Definition: A metal, ceramic or plastic receptacle for collecting the urine of a person who is unable to use a toilet or commode.

Purpose: To assist the student with regular evacuation of his bladder.

Equipment: Disposable gloves, urinal, bell or call system, cot protector, equipment for handwashing, newspaper to protect the furniture.

Steps	Notes
Determine the need for the student to use a urinal at school.	Review the physician's orders and the student's health care action plan.
Provide privacy for the student.	Privacy aids relaxation and assists emptying of the bladder.
Assemble the necessary equipment. Have the student wash his hands. Undress the student as needed.	Encourage the student to assist as much as he is able.
Wash your hands; put on disposable gloves, if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Have the student place a protector on the cot or chair under his penis and across his thighs if needed.	Assist the student or do it for him if he is unable to help himself.

Steps	Notes
Have the student place the urinal in position.	Assist the student or do it for him if he is unable to help himself.
If he is not already sitting, raise the student to a sitting position if allowed, with supports at his back. Drape him for privacy.	Sitting is a natural position for voiding.
Make sure that a bell or calling device is within easy reach.	So the student can let you know when he is finished.
Leave the area to give the student privacy unless he should not be left alone.	Do not leave the student with the urinal any longer than is necessary.
Remove the urinal and set it on a protected surface. Cover it.	Use newspaper to protect furniture from moisture and spills. Cover the urinal with a paper cup or paper towel.
Note condition of student's skin and genitalia. Cleanse and provide skin care if needed.	
Remove the cot protector and redress the student.	Make sure his clothes are neat and dry.
Allow the student to wash his hands and help him to get into a comfortable position on a cot or in his wheelchair.	Use towelette or warm soapy washcloth if student cannot be brought to a sink. Rinse and dry hands.
Take the urinal to the bathroom. Note the appearance of the urine. Empty the contents into the toilet.	If the student is on recorded intake and output, measure the urine.
Clean the urinal: If you are not already wearing gloves, wash your hand and put gloves on now.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Rinse the urinal with cold water. Use hot, soapy water and a brush to cleanse thoroughly. Disinfect. Rinse well and dry.	Refer to Appendix C. Handling Body Fluids.
Cover urinal and store it appropriately.	

Steps	Notes
Remove and discard your gloves. Wash your hands.	Refer to Appendix B. Handwashing.
Document assisting the student to use the urinal on the student's health record or flow sheet.	Record date and time, description and amount of urine if needed, any problems, student's ability to perform this procedure.
end	end

CARE OF INCONTINENT STUDENT

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Caring for the incontinent student will not usually be delegated by the school RN when there is evidence of skin breakdown and/or infection.

REMARKS:
Parent/guardian to provide supplies of clean clothes.

Appendix A

PROCEDURE

Definition:	An **incontinent student** is one who is unable to control the passage of urine or feces (stool).
Purpose:	To keep the student as clean and dry as possible; to prevent skin breakdown and subsequent infection; to improve the student's acceptance by his school peers.
Equipment:	Incontinence pads (such as Attends), bedpan and urinal, soap and water, washcloth and towel, clean clothing, plastic bag for soiled clothing, plastic lined waste container, toilet tissue, gloves.

Steps	Notes
Observe the student on a routine basis. Try to determine possible voiding pattern.	Review physician's orders and student's health care action plan.
When the student is wet or soiled, take him to the bathroom or a another private area.	
Gather your supplies.	Arrange them on a clean work surface near the student.
Wash your hands; have the student wash his hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and appendix C. Handling Body Fluids.

Steps	Notes
Have the student take off his soiled clothing and place it in a plastic bag; seal the bag with a bag tie.	Assist him as needed.
Offer the student the bedpan or urinal or have him use the toilet.	If this is developmentally appropriate.
Assist the student to lie down on a changing table or cot, or place him on it.	Protect this area with a disposable cover.
Clean away any residual urine and feces.	Use toilet tissue. Discard in toilet or waste container.
Clean the student's skin with warm soapy washcloth; rinse and pat dry.	Be sure to clean all soiled skin.
Observe the condition of the student's skin.	Use powders or skin preparations only when ordered.
Assist student to put on clean clothing, as needed.	These are supplied by the parent.
Change the protective pad on the student's cot or chair if needed.	Clean the washable surfaces of cot or chair.
Have the student wash his hands.	Refer to appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	Take him to class if he is unable to go on his own.
Discard protective covering from changing surface; disinfect the surface after each use.	Refer to Appendix C. Handling Body Fluids.
Discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Observe the student for early indications of readiness for a bowel or bladder training program.	
Document care of the incontinent student on his health record or treatment log.	Record date and time, condition of skin, unusual appearance of urine or stool, signs of readiness for training, student's understanding and participation in this procedure.
==end==	==end==

STOMA CARE

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Stoma care will not usually be delegated by the school RN when there is evidence of skin breakdown and/or infection.

REMARKS:
Parent/guardian to provide specialized supplies for care.

Appendix A

PROCEDURE

Definition: A **stoma** is a surgically created opening through the skin to the intestine or urinary tract to provide for elimination of bodily wastes. **Stoma care** and **ostomy care** are frequently used interchangeably.

Purpose: To keep the stoma and the surrounding skin in good condition; to encourage as much self care as developmentally or physically possible; to facilitate acceptance of the student in school.

Equipment: Clean ostomy bag, skin protectors and adhesives as ordered, adhesive remover, extra adhesive, scissor, toilet paper, washcloth and towel, warm water and mild soap, stoma measuring guide, non-irritating tape, bedpan or collection container, plastic lined trash container, gloves.

Steps	Notes
Observe the student to determine if stoma/ostomy care needs to be given at school.	Review the physician's orders and the student's health care action plan.
EMPTY THE OSTOMY BAG when it is full or as ordered. Tell the student what you will be doing.	Encourage the student to do this for himself whenever possible. Use developmentally appropriate language and demonstration.
Arrange for privacy.	Student may need permission to use a restroom with doors and available soap.

Steps	Notes
Wash your hands; have student wash his hands. Use disposable gloves, if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Position the student appropriately on/over the toilet or over a bedpan.	Protect the student's clothing from soil.
Release the tie, rubber band or clip at bottom of bag and allow the contents to drain into the toilet or bedpan.	
Use a rinse (spray) bottle or a cup of warm water to flush the bag; drain again.	Dry the bag.
Reclose the bag securely.	
Have the student wash his hands.	Refer to Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	
Clean the bedpan if it was used.	Refer to Appendix C. Handling Body Fluids.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document emptying the ostomy bag on the student's health record or treatment log.	Record date and time, quantity and description of urine or stool, student's ability to participate in this task, any problems.

CHANGE THE OSTOMY BAG / PROVIDE STOMA CARE

This is usually done at home as bags usually last longer than a school day. Change the ostomy bag at school only if it is leaking.	Refer to student's health care action plan.
Gather your supplies.	
Provide privacy.	Student may need to lie down for part of this procedure.
Tell the student what you will be doing.	Have student do as much of this procedure as he can.

Steps	Notes
Wash your hands; have the student wash his hands. Wear gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Undress the student sufficiently to visualize the stoma and surrounding skin.	Have the student do as much as he can. Protect his clothing from soil.
Gently remove the present ostomy bag.	**Push the skin gently away from the bag rather than pulling the bag away from the skin.** If any part is sticking, mild soap and water will loosen it.
Cover the stoma with small wad of toilet tissue, or a few 4x4s.	Absorbs leaking secretions while you work.
Empty the contents of the bag into the toilet or bedpan. Rinse and empty it again.	Note the approximate amount and a description of the contents.
Discard disposable bag. Place reusable bag in a container for student to take home with him.	Refer to Appendix C. Handling Body Fluids and the student's health care action plan.
Gently cleanse stoma and surrounding skin with soap and water; rinse thoroughly and pat dry.	DO NOT SCRUB! Remove all old adhesive; use adhesive remover if needed.
Observe skin for irritation, breakdown or infection.	Early intervention is essential.
Use ostomy bag and skin barrier the parents have measured and prepared at home, or accurately measure the stoma size with stoma measuring device.	To prevent body fluids from irritating the skin, the barrier opening should be no more than 1/8 inch larger than stoma.
Apply the recommended skin barrier, and allow it to dry.	Use only skin care protectors and adhesives ordered for this student.
Cut and shape the stomahesive barrier as needed. Do not fold it while cutting.	See health care action plan. A fold will cause leaks after it is applied.
Remove paper backing and center the new bag over the stoma; press firmly in place on top of the barrier.	Extra adhesive may be needed. Work from the stoma outward to assure a good seal. Use your fingernail to press bubbles out, making sure contact is without wrinkles.

Steps	Notes
Seal the bottom of the bag.	In general, fold the end of the bag up 3 or 4 times and then accordion pleat it lengthwise; secure it with a rubber band. Follow instructions specific to that bag.
Reinforce the seal with hypoallergenic tape if ordered.	Student may also use a soft belt or strap to help secure the bag.
Have the student wash his hands.	Refer to Appendix B. Handwashing.
Assist the student to redress.	Check to see his clothing is clean and the ostomy bag is not unduly noticeable.
When ready, have the student resume his scheduled classroom activities.	Have the student wash his hands if he participated in his care.
Empty the bedpan into the toilet. Clean the equipment and supplies. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids, and the student's health care action plan.
Wash your hands.	Refer to Appendix B. Handwashing.
Document stoma/ostomy care on the student's health record or treatment log.	Record date and time, why it was done, description of urine or stool with approximate amounts, condition of skin and stoma, student's participation and understanding, any problems.
Inform appropriate school staff of the potential benefits and side effects of stoma / ostomy care.	This allows the staff to plan to optimize the student's performance and to report any problems from this procedure that they observe.
Summarize the student's need for and apparent benefit (or lack of benefit) from stoma/ostomy care at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

DIAPERING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Diapering will not usually be delegated by the school RN when there is evidence of skin breakdown and/or infection.

REMARKS:
Parent/guardian will provide specialized supplies.

Appendix A

PROCEDURE

Definition:	To diaper means to enclose the lower trunk of an individual with cloth or absorbent material placed between his legs and secured at his waist.
Purpose:	To contain the urine and stool of an incontinent person or a baby.
Equipment:	Diaper or absorbent pad, washcloth and towel, soap and water, plastic bags with ties for soiled clothing, covered plastic lined container for soiled non-disposable diapers, disposable gloves, changing table or pad with disposable cover and a washable surface.

Steps	Notes
Determine the necessity for the student to wear diapers or protective undergarments at school.	Refer to physician's orders and student's health care action plan. Only use diapers when ordered. Never use diapers as punishment for soiling other clothing.
Avoid embarrassing the student.	An incontinent child or young adult is not a baby and, if developmentally able, may be dismayed by this loss of dignity.

Steps	Notes
Routinely check to see if the student's diapers need changing.	Check every two hours or as specified in the student's health care action plan.
Gather the needed supplies.	Parents provide diapers and an extra set of clean clothing for use if an accident occurs.
Arrange for adequate privacy in the classroom or restroom.	Use a screen if necessary.
Tell the student what you will be doing and why.	Use developmentally appropriate language.
Wash your hands; have the student wash his hands. Put on disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Place the disposable cover on the changing area.	Should be big enough to cover area under student's lower trunk and upper legs.
Assist the student to lie down on the changing table or pad. Drape for privacy.	Make sure he is safe.
Remove soiled outer clothing.	Place them in a double plastic bag that can be tied closed. Label the bag with the student's name and send it home with him.
Remove soiled diaper.	
Discard disposable diaper in a tied plastic bag into a plastic lined covered container.	Disposable diapers are very much preferred at school.
When a cloth diaper is soiled with feces wait until diapering is complete to rinse it in the toilet and then double bag and tie it for the student to take home.	Refer to Appendix C. Handling Body Fluids.
Wash the student's buttocks, thighs, perineum, lower abdomen and back if they are soiled or wet.	Use soap sparingly; rinse very well and dry completely.
Observe the condition of his skin.	Notify the school nurse if there is evidence of irritation, breakdown, or infection.

Steps	Notes
Use only prescribed ointments and powders.	
Apply the clean diaper securely and comfortably.	Two or more pins or tapes may be needed on each side for larger students.
Assist the student to redress in clean dry clothing.	Have the student resume his scheduled classroom activities.
Discard the protective covering on the changing area.	Refer to Appendix C. Handling Body Fluids.
Wash the changing table with soap and water if soiled with feces or urine; rinse and dry. Disinfect after each changing.	Refer to Appendix C. Handling Body Fluids.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document diapering on the student's health record or treatment log.	Record date and time, appearance and approximate amount of urine and stool, condition of student's skin, student's understanding of and response to this procedure, any problems.
end	end

PRESCRIBED BOWEL AND BLADDER TRAINING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Prescribed bowel and bladder training will not usually be delegated by the school RN when there is evidence of skin breakdown and/or infection.

REMARKS:
Parent/guardian will provide supplies and medications as prescribed by the physician.

Appendix A

PROCEDURE

Definition: Bowel and bladder training procedures are individually designed plans to regularly and consistently aid the student to overcome incontinence.

Purpose: To establish or re-establish control over the time, place and method of elimination of urine and stool; to minimize complications from poor bladder and bowel habits; to foster the student's independence and acceptance by his peers.

Equipment: Varies with the individual plan.

Steps	Notes
Determine if bowel and bladder training programs should be initiated or just supported at school.	Review the physician's orders and the student's health care action plan. The training program is usually initiated at home and supported at school.
Observe the student for current patterns of elimination. Obtain history of past patterns of elimination, if any.	This requires information from the student, the family and all those who provide care over 24 hours. Keep a record for at least several days. Illness, medication, changes in the environment will effect elimination patterns.

Steps	Notes
Observe the student for signs of developmental and physical readiness for a training program.	A student must be aware that there is a relationship between his internal sensations and the external consequences of being wet or soiled before he can truly participate in the program. A program of regular and routine use of the bedpan, commode or toilet may be initiated by the caretakers and be relatively successful even without the student's awareness or understanding.
Support the school/home training program. Separate programs for bowel and bladder training are recommended with either concurrent or sequential implementation.	A physician's order is required if medication is to be used. The design must be realistic and have a reasonable chance of success. The plan must be written and shared with all those who will help implement it or could hinder it. Involve the student; at the very least tell him what you will be doing.
Prepare to implement the school portion of the training program.	
a) Modify the student's diet if needed.	Work with the parents; notify school personnel if special diet is needed.
b) Arrange for all needed equipment.	
c) Arrange for instruction of caretakers.	If they are unfamiliar with prescribed bowel stimulation methods, or any of the techniques necessary to the safety and success of the training program.
Implement the school portion of the training program.	
a) Begin the program with short and long term objectives and a definite plan for reevaluation and revision.	Keep in mind that this will be a long process that must be individualized to have any chance of success.
b) Break the process into small increments.	Work for success in each step before proceeding on.
c) Keep the student aware of his progress.	Use rewards for success.
d) Continue to observe the student and the process.	With an eye toward improvement.

Steps	Notes
Evaluate the student's progress during the school portion of the training program(s).	Evaluate as scheduled. Be sure to give the plan a chance to work before you change it. Be aware of school and classroom constraints, caretakers's attitudes, overlooked rewards for both desired and undesirable behavior, need to communicate with family and caretakers the results of their efforts.
Redesign the school portion of the school/home training program(s).	Incorporate what you learned from the first try and move on. Put the plan in writing and set new short and long term objectives with specific time for reevaluation. Make sure both portions of the training program supports each other.
Reevaluate the student's success.	Continue until bowel and bladder control has been established or until the specific goals for this student have been met.
Document initiating or supporting school/home bowel and bladder training program on the student's health record or treatment log.	Record date and time, procedures used, successes and failures, student's understanding and participation in the program.
══end══	══end══

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APPLY STERILE DRESSING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Application of sterile dressing will not be delegated to a non-nurse.

REMARKS:
Written authorization from the physician.
Parent/guardian to provide supplies.

Appendix A

PROCEDURE

Definition: **Dressing** is a therapeutic material applied to a wound; **sterile** means without pathogenic organisms; **sterile technique** is a means of carrying out the procedure without contamination by pathogenic organisms.

Purpose: To protect the wound site from infection; to prevent further contamination of an already infected wound; to absorb fluids or discharge; to apply medication; to apply pressure; to prevent or reduce swelling; to immobilize or support an area of the body.

Equipment: Sterile glove package, sterile dressing equipment package, extra sterile dressings, sterile 4x4s, sterile pads, sterile applicators as needed, sterile antiseptic solution as ordered, sterile saline or water as ordered, hypoallergenic tape, plastic lined waste container with closures, adhesive, plastic backed pads to protect the student's clothing, cot and the work surface.

Steps	Notes
Determine the need to change a sterile dressing at school.	Review physician's orders and the student's health care action plan.
Arrange for a clean, private area to change the dressing.	Consider traffic patterns and the routine use of this area.

Steps	Notes
Tell the student what you will be doing.	Use developmentally appropriate language.
Wash your hands.	Refer to Appendix B. Handwashing.
Establish a clean work surface next to the student.	
Gather your equipment and supplies. Open and arrange them on the clean work area; add sterile 4x4's, cotton balls, applicators as required; fill containers if appropriate; cut tape strips.	Observe sterile technique for the setup. Use supplies as ordered.
Place waste container within reach but well away from sterile setup.	
Position the student with the old dressing completely exposed.	Keep the student covered modestly.
Gently loosen the tape along its long axis. Remove and discard the outer layers of the dressing. Keep the inner dressing in place until you are ready to remove it and to apply a new dressing.	**Push the skin away from the tape rather than pulling the tape away from the skin.** Work toward the wound to avoid stretching newly formed tissue.
Wash your hands. Put on sterile gloves.	Refer to Appendix B. Handwashing. Do not contaminate the setup or the gloves.
Carefully remove the old inner dressing, holding it with forceps or by its corners with your less dominant gloved hand.	The less dominant hand in now considered contaminated and should not be used to handle sterile dressings, etc.
Observe for drainage and odor. Discard.	Discard in plastic lined waste container.
Observe the wound site for healing and for signs of irritation and infection.	
Cleanse the wound: With a clean forceps, use a cotton ball or 2x2s saturated with antiseptic solution.	Cleanse in a circular pattern from the wound outward to an area at least 2 inches beyond. Discard each cotton ball or gauze after one pass.

Steps	Notes
Rinse with sterile water or saline, as ordered, and dry the wound.	Use the same techniques as for cleaning the wound.
Apply skin preparation.	Use only if ordered.
Apply new sterile dressing of appropriate size and thickness.	As ordered; will change as wound heals.
Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Tape lightly to secure.	Use hypoallergenic tape.
Finish securing the dressing in place.	Use additional tape or binder as needed or ordered.
Make the student comfortable and presentable.	When he is ready have the student resume his scheduled classroom activities.
Discard all used supplies and contaminated dressings appropriately.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Store all unused supplies. Clean equipment for reuse; wear gloves, if needed. Return the work area to its normal appearance.	Refer to Appendix C. Handling Body Fluids.
Document changing a sterile dressing on the student's health record or treatment log.	Record date and time, location of the wound, what was done, appearance of the wound, type and amount of drainage, student's reaction to the procedure, any problems.
Inform appropriate school staff of the potential benefits and side effects of changing a sterile dressing.	This allows the staff to plan to optimize the student's performance and to report any concerns about the dressing that they have.
Summarize the student's need for and apparent benefit (or lack of benefit) from having a sterile dressing changed at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
==end==	==end==

APPLY CLEAN DRESSING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Application of clean dressing will not usually be delegated by the school RN when there is evidence of infection, bleeding, or drainage; or complaints of pain or discomfort.

Appendix A

PROCEDURE

Definition:	Dressing is a therapeutic material applied to a wound; clean means not sterile, but with a minimum of pathogenic organisms.
Purpose:	To protect a wound from infection; to absorb fluids or discharge; to apply medication; to apply pressure; to prevent or reduce swelling; to immobilize or support an area of the body.
Equipment:	Disposable gloves, clean dressing, hypoallergenic tape, scissors, medication if ordered, skin preparation if ordered, antiseptic solution if ordered, plastic lined waste container.

Steps	Notes
Observe the student to determine the need to change or apply a clean dressing at school.	Review the physician's orders and the student's health care action plan.
Provide privacy.	
Tell the student what you will be doing and how he can assist you.	Use developmentally appropriate language. Have the student assume as much responsibility for his care as he can.
Prepare a clean work area near the student.	

Steps	Notes
Gather your equipment.	Arrange it on the clean work area.
Have the student wash his hands.	Refer to Appendix B. Handwashing.
Position the student so the dressing is completely exposed.	Keep him modestly covered.
Wash your hands. Put on disposable gloves if appropriate.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Prepare the new dressing: open 4x4 packages, cut tape strips.	This will minimize exposure of wound.
Gently loosen the old dressing.	Remove by pushing skin away from the tape rather than pulling tape from the skin.
Remove the old dressing.	Hold it by the cleanest edge. Observe the dressing for type and amount of drainage and odor.
Discard the dressing.	Refer to Appendix C. Handling Body Fluids.
Observe the wound and surrounding skin.	Note wound healing and signs of infection or irritation.
Cleanse the wound and/or the surrounding skin if ordered.	Use soap and water or antiseptic solution as ordered; rinse and dry. Cleanse from the wound outward in a circular pattern covering each area only once.
Apply skin preparation if ordered.	
Apply medication if ordered.	Medication may need to be applied to the dressing or directly to the wound.
Holding the clean dressing material only by the corners, apply it to the wound.	Cover the entire wound and at least one inch of surrounding skin.
Tape the dressing securely in place.	Use as little tape as possible. Do not "window pane" the dressing with tape unless ordered to do so.

Steps	Notes
Remove and discard your gloves. Wash your hands; have the student wash his hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Make the student comfortable and presentable.	When he is ready, have the student resume his scheduled classroom activities.
Discard all used and contaminated supplies. Clean equipment for reuse; wear gloves, if needed. Return the work area to its original appearance.	Refer to Appendix C. Handling Body Fluids.
Document changing/applying a clean dressing on the student's health record or treatment log.	Record date and time, location of the lesion, what was done, type and amount of drainage and odor, condition of the wound and skin, the student's response to the procedure, any problems.
Inform appropriate school staff of the potential benefits and side effects of changing/applying a clean dressing.	This allows the staff to plan to optimize the student's performance and to report any problems with his dressing that they observe.
Summarize the student's need for and benefit (or lack of benefit) from having a clean dressing applied or changed at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
==end==	==end==

APPLY REINFORCEMENT DRESSING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Reinforcement of a dressing will not usually be delegated by the school RN when there is excessive bleeding or drainage; or complaints of pain or discomfort.

Appendix A

PROCEDURE

Definition:	Dressing is a therapeutic material applied to a wound; reinforce means to strengthen or to make more effective;
Purpose:	To absorb additional drainage; to secure a loose dressing; to provide additional protection to the injured area.
Equipment:	Clean dressing material, tape, scissors, disposable gloves if needed, plastic lined waste container.

Steps	Notes
Observe the student and determine under what conditions the dressing should be reinforced at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and why.	Use developmentally appropriate language.
Assemble the needed equipment close to the student.	
Wash your hands. Use disposable gloves if indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Observe the condition of the old dressing including the type and amount of drainage and odor.	
Remove outer layers of old dressing; discard.	Remove outer layers only if ordered.

Steps	Notes
Apply additional clean dressing material to accomplish the purpose of the dressing.	Use 4x4s, pads, gauze roll, clean cloth; secure with tape or binder.
Be careful not to limit circulation to the area below the wound any more than is absolutely necessary.	Check color, warmth and capillary refill in the affected hand or foot.
If reinforcement was not anticipated, continue to observe the student until the problem is stabilized. Notify the physician, parents and the school principal. If reinforcement was anticipated, check the student as scheduled.	Refer to student's health care action plan.
Make the student comfortable and presentable.	When he is ready, have the student resume his scheduled classroom activities.
Discard used and contaminated supplies; remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document the application of a reinforcement dressing on the student's health record or treatment log.	Record date and time, location of the wound, why the procedure was done, what was done, the student's reaction to the procedure, any problems.
end	end

REFERENCES for Chapter 11. DRESSING:

American National Red Cross. Family Health and Home Nursing. Garden City, NY: Doubleday & Company, Inc., 1979.

Brunner, L. S. and Suddarth, D. S. The Lippincott Manual of Nursing Practice, 4th edition. Philadelphia: J. B. Lippincott Company, 1986.

King, Eunice M., Lynn Wieck, and Marilyn Dyer. Illustrated Manual of Nursing Techniques. Philadelphia: J. B. Lippincott Company, 1977.

Zucker, Elana D., ed. Being A Homemaker/Home Health Aide. Bowie, MD: Robert J. Brady Co., Prentice-Hall Publishing, 1982.

USE OF WARM AND COOL APPLICATIONS

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Requires prescription from the physician.
Availability of supplies and equipment.
Special precaution for students who have diabetes or heart disease or unstable basal body temperature.

Appendix A

PROCEDURE

Definition: Therapeutic use of a physical device applied to the student's body to bring about a change in temperature either locally or systemically. The outcome is modified by the method and interval of the application, the condition of the body part, general health, the amount of skin covered by the application, the extent of warmth or cold utilized.

Purpose: **Warm applications** are used to increase circulation through vasodilation, ease aching muscles, promote healing, promote comfort, provide general warmth, soften exudate, increase metabolism. **Cool applications** are used to reduce swelling and inflammation, diminish pain by local anesthesia, stop bleeding through vasoconstriction, decrease metabolism, lower general body temperature.

Equipment: Will vary with the procedure ordered.

WARM APPLICATIONS

Steps	Notes
Observe the student to determine the need for warm applications at school.	Review the physician's orders and the student's health care action plan.
Determine which method of heat is required:	As ordered by the physician.

Steps	Notes
Dry heat from a hot water bottle, aquamatic pad, heat cradle or lamp, heating pad; **Moist heat** from a compress, a pack or a soak.	Follow manufacturer's instructions and/or student's health care action plan.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language.
Arrange for privacy if needed.	
Gather the needed equipment and supplies.	Place them close to the student.
Wash your hands. Put on disposable gloves if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Position the student to expose the area requiring the warm application.	Make him comfortable as this position will be needed for a length of time.
Measure the temperature of the solution to be used with a cooking **THERMOMETER**; check the settings on electrical devices.	Warm = 100° to 105°F.; hot = 105° to 115°F. Never exceed 115°F.
When using dry heat, protect the skin from direct contact with the heated appliance. Use measuring apparatus to determine correct distance when using a heat lamp.	Use a towel or cover to insulate. Fill hot water bottle ½ full; remove air before closing.
When using moist heat, use gauze or cloth 2 to 4 times the area to be treated with 2 to 4 thickness.	Use sterile technique if ordered. Cover with a cloth or plastic; secure the compress or pack lightly in place; apply heating pad or hot water bottle to maintain heat. **Do not allow a heating pad to get wet as this might cause an electrical burn.**
Leave warm application in place for the required time. Use an accurate timing device to ensure that heat is not left on for a prolonged period.	Periodically check the skin for unusual redness. Skin may look pink but should not look "sunburned". Remove heat source if this occurs.
Change moist compress or pack if it cools before the prescribed time is completed.	

Steps	Notes
Remove the warm application.	
Observe the skin and wound for changes; take the student's temperature if ordered.	Apply medication if ordered. Reapply dressing if needed.
Reposition the student for comfort.	Have the student resume his scheduled classroom activities.
Clean the reusable equipment. Discard used or contaminated supplies. Remove and discard you gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document the use of warm applications on the student's health record or treatment log.	Record date and time, why the procedure was done, the duration of the treatment, temperature or setting of the application, vital signs if taken, appearance of the wound or body area, condition of the skin, student's response to the procedure, any problems.
Inform appropriate school staff of the potential benefits and side effects of the use of warm applications.	This allows the staff to plan to optimize the student's performance and to report any reactions to this treatment that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from receiving warm applications at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

COOL APPLICATIONS

Steps	Notes
Observe the student to determine the need for cool applications at school.	Review the physician's orders and the student's health care action plan.
Determine what method of cool application is required:	As ordered by the physician.
Dry cold from a Freezabag, ice bag or chemical ice pack;	Check all chemical ice pack, etc. for leaks.
Moist cold from a tepid or cool sponge bath, compress or pack, or soak.	

Steps	Notes
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language.
Arrange for privacy if needed.	
Gather the needed equipment and supplies.	Place them close to the student.
Position the student to expose the area requiring the cool application.	Make him comfortable as this position will be needed for a length of time.
Wash your hands. Put on disposable gloves if needed.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Measure the temperature of the solution to be used with a cooking THERMOMETER.	Tepid = 80° to 98°F., cool = 65° to 80°F., cold = 59° to 65°F.
When using dry cold, protect the skin from direct contact with the cooled appliance.	Use a towel or cover to insulate. Fill ice bag ½ full; remove air before closing.
When using moist cold, use 2 to 4 thicknesses of gauze or cloth that is 2 to 4 times the size of the area to be treated.	Use sterile technique if ordered. Cover with a cloth or plastic; secure the compress or pack lightly in place.
Leave cool application in place for the required time. Use an accurate timing device to ensure that cold in not left on for a prolonged time.	Periodically check the skin for unusual pallor or redness; remove cold source if this occurs.
Change moist compress or pack if it warms before the prescribed time is completed.	
Remove the cool application.	
Observe the skin and wound for changes; take the student's temperature if ordered.	Apply medication if ordered. Reapply dressing if needed.
Reposition the student for comfort.	Have the student resume his scheduled classroom activities.
Clean the reusable equipment. Discard used or contaminated supplies.	Refer to Appendix C. Handling Body Fluids.

Steps	Notes
Wash your hands.	Refer to Appendix B. Handwashing.
Document using cool applications on the student's health record or treatment log.	Record date and time, why the procedure was done, the duration of the treatment, temperature of the application, vital signs if taken, appearance of the wound or body area, condition of the skin, student's response to the procedure, any problems.
Inform appropriate school staff of the potential benefits and side effects of using cool applications.	This allows the staff to plan to optimize the student's performance and to report any reactions to this treatment that they observe.
Summarize the student's use of and apparent benefit (or lack of benefit) from using cool applications at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

REFERENCES for Chapter 12. USE OF WARM AND COOL APPLICATIONS:

American National Red Cross. Family Health and Home Nursing. Garden City, NY: Doubleday & Company, Inc., 1979.

Brunner, L. S. and Suddarth, D. S. The Lippincott Manual of Nursing Practice, 4th edition. Philadelphia: J. B. Lippincott Company, 1986.

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ORAL HYGIENE, NAIL CARE, HAIR CARE, and SKIN CARE

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, teacher, health clerk, social worker, counselor, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Personal hygiene will not usually be delegated by the school RN when there is evidence of rash, skin breakdown and/or infection.

REMARKS:
May require physician's authorization to provide this care.

Appendix A

ORAL HYGIENE

Definition:	Cleansing of the mouth, gums, teeth and tongue.
Purpose:	To maintain the teeth, mouth and gums in a healthy condition; to lessen offensive mouth odor by decreasing the bacterial count; to prevent inflammation and infection of the oral structures; to stimulate the appetite; to provide a sense of health and comfort.
Equipment:	Student's own soft bristled toothbrush or tooth sponge and student's own towel, toothpaste, dental floss, glass of tepid water, padded tongue blade, empty basin, drinking straw, swabs, moisturizer for lips and mouth, mirror, plastic lined waste container, disposable gloves.

Steps	Notes
Observe the student to determine the need for oral hygiene at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can help.	Teach and encourage him to do his own care whenever possible. Use developmentally appropriate language. He should have his own toothbrush or tooth sponge with an adaptive handle if needed.

Steps	Notes
Arrange for privacy if possible.	Use a portable screen if available.
Gather the equipment and supplies.	Arrange them on a clean work surface near the student.
Position the student appropriately.	An ambulatory or wheelchair student may go to the sink; a non-ambulatory student may sit in semi-Fowler's position (back and head raised to about 70° angle to cot surface); a helpless student should be positioned on his side.
Wash your hands; wash the student's hands. **PUT ON DISPOSABLE GLOVES.**	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Drape the towel across the student's chest.	To protect his clothing.
Place a mirror in front of the student.	So you both can see into his mouth.
If the student can spit	
Offer the student water to rinse his mouth. Have him swish and spit.	Use a drinking straw if needed. Spit into the sink or basin.
Moisten the toothbrush; apply a small amount of toothpaste.	Follow health care action plan.
Assist the student to systematically brush all surfaces of his teeth. Place the toothbrush at an angle against the gum line; gently scrub by wiggling the brush in short circular strokes on the surface of each tooth; use the end of the brush in the same manner on the inside of the front teeth; scrub the chewing surfaces.	A student with limited mobility may benefit from an electric toothbrush with a small soft brush and adaptive handle. Obtain a new toothbrush at least quarterly.
Rinse and spit as needed.	
Assist the student to gently brush the surface of his tongue.	Removes coating and bacteria.
Assist the student to floss his teeth: Use approximately 18 inches of floss.	Flossing is usually done at home.

Steps	Notes
Wrap most of the floss around the middle finger of one hand and the rest around the middle finger of the other with about 1 inch between the hands.	
Place a mirror in front of the student so both of you can see into his mouth. Stand behind the student.	While flossing can be done from in front of the student, it is easiest from behind.
Guide the floss with your thumbs and forefingers and gently insert it between the teeth.	Use a sawing motion.
Curve the floss into a ∩ around the tooth at the gum line. Slide it gently into the space between gum and tooth.	
Scrape with the floss.	Repeat on both sides of each tooth.
Rinse and spit.	
Use mouthwash only if ordered.	Follow student's health care action plan.
Glycerine and lemon juice may be applied to all surfaces of the mouth and tongue with cotton tipped applicators to relieve dryness.	Use only if ordered; mix 4 parts glycerine to 1 part lemon juice.
Assist the student to wipe his lips and face.	To remove any toothpaste and drainage.
Apply lubricant to the student's lips.	As ordered; usually vaseline, mineral oil, glycerine and lemon juice or commercial lip balm.
Remove the towel; position the student for comfort.	Have the student return to his regularly scheduled classroom activities.
If the student cannot spit Follow the above procedure using oral suction (or gravity and 4x4s) to remove toothpaste and water.	Go slowly; use very little toothpaste; rinse and moisten the toothbrush frequently. Suction or drain his mouth regularly to keep saliva and fluids from accumulating.

Steps	Notes
If the student can neither suck nor spit	
Turn the student so that gravity will aid removal of fluid from his mouth.	
Use a padded tongue blade as needed to separate his teeth.	
Use a small, soft toothbrush or tooth sponge to clean all surfaces of his teeth.	Use whatever cleansing mixture is ordered. An electric toothbrush makes this task much easier.
Rinse with clear water and use oral suction (or gravity and 4x4s) to remove the water.	Use a small syringe without the needle to gently squirt ½ to 1 teaspoon of water on each area of the mouth.
Complete the mouth care as above.	
Discard used supplies in waste container. Clean and store reusable equipment. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document providing oral hygiene on the student's health record or treatment log.	Record date and time, condition of the teeth and gums, condition of tongue and mucosa, why the procedure was done, what was done, how the student reacted to the procedure, how much he was able to do for himself, any problems.
══end══	══end══

NAIL CARE

Definition:	Cleaning the student's fingernails and nailbeds, and trimming his fingernails.
Purpose:	To minimize infection of mouth, nose and skin; to decrease injury from scratching; to improve the student's appearance.
Equipment:	Soap and water at the sink or in a basin, very soft nail brush, orangewood stick, towel, hand lotion or prescribed skin lubricant, manicure scissors, nail clippers, nail file, plastic lined waste container.

Steps	Notes
Observe the student to determine the need for nail care at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can help you.	Use developmentally appropriate language.
Gather your equipment.	Arrange it near the student.
Protect the student's clothing from moisture.	Use the towel as a drape.
Position the student to soak one hand in the sink or basin of warm soapy water for a short time.	If needed, use the nail brush gently on the base of the nail, the knuckles and under the nail.
Clean under the fingernails with the orangewood stick.	Be gentle, not vigorous.
Rinse well and dry thoroughly. Gently push back the cuticles with the towel.	To prevent soap irritation and chapping.
Use the manicure scissors or nail clippers to trim the nails. Use nail file on rough edges.	Keep the nails short, smooth and with a slight curve. Be careful not to cut into the finger pad.
Apply hand lotion or prescribed skin lubricant.	Refer to student's health care action plan.
Repeat the procedure on the other hand.	With some students you may wish to wash both hands at the same time. You may provide toenail care, but this is usually done at home.
Have the student resume his scheduled classroom activities.	
Discard used supplies; clean and store your reusable equipment.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document providing nail care on the student's health record or treatment log.	Record date and time, why the procedure was done, what was done, the student's participation in and reaction to this procedure, and problems.
end	end

HAIR CARE

Definition: Brushing, combing and styling the student's hair.

Purpose: To stimulate the circulation to the scalp; to inspect the scalp for signs of irritation or infection; to inspect the hair for lice; to improve the student's appearance and self-esteem.

Equipment: Student's own towel, brush, and comb; mirror, plastic lined waste container.

Steps	Notes
Observe the student to determine the need for hair care at school.	Review the physician's orders and the student's health care action plan. Washing the student's hair is the parent's responsibility and is done at home.
Tell the student what you will be doing and how he can help.	Use developmentally appropriate language.
Gather you equipment.	Arrange it near the student. Each student must have his own comb, brush and towel. DO NOT SHARE.
Have the student in a sitting position in front of a mirror, if possible.	
Cover the student's shoulders with the towel.	If he is lying down, cover the pillows.
Remove the student's eyeglasses, if worn.	Put them in a safe place.
Part and section the student's hair.	To make it easier to manage.
Brush and/or comb the student's hair carefully, gently and thoroughly.	Use a downward motion with the comb or brush, starting at the loose end and working toward the scalp to remove tangles and knots.
Carefully observe each section of hair and scalp.	Look for irritation, infection and infestation.
Arrange the student's hair the way he wants it. Return his eyeglasses if the were removed. Let him see himself in a mirror.	Encourage a simple, tidy style, but respect his desires.

Steps	Notes
Remove the towel.	Have the student resume his scheduled classroom activities.
Remove loose hair from the brush with the comb; discard. Wash the comb and brush in soapy water; rinse and air dry.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document providing hair care on the student's health record or treatment log.	Record date and time, why the procedure was done, what was done, the condition of the hair and scalp, the student's participation in and reaction to this procedure, any problems.
end	end

SKIN CARE

Definition: Cleaning and lubricating the student's skin.

Purpose: To maintain the integrity of the skin; to reduce the incidence of infection; to improve the student's appearance and comfort; to stimulate circulation.

Equipment: Soap and water, washcloth, towel, skin lubricant.

Steps	Notes
Observe the student to determine the need for skin care at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language.
Arrange for privacy.	Use a portable screen if available.
Gather your equipment.	Place it close to the student.
Wash your hands; wash the student's hands.	Refer to Appendix B. Handwashing.
Assess the type and extent of skin care needed.	Follow student's health care action plan.

Steps	Notes
Provide the skin care.	See related chapters. Chapter 10. Bowel & Bladder, Diapering Chapter 12. Warm and Cool Applications Chapter 14. Care and Prevention of Decubitus Ulcers Chapter 15. Positioning Chapter 16. Range of Motion and Prescribed Exercises Chapter 18. Casts and/or Braces
Have the student assist you whenever possible.	When skin care is complete have the student return to class.
Wash your hands.	Refer to Appendix B. Handwashing.
Document providing skin care on the student's health record or treatment log.	Record date and time, what procedure was done, why and how it was done, the student's participation in and reaction to this procedure, any problems, any improvement noticed in the skin.
end	end

PERSONAL HYGIENE

Steps	Notes
Inform the appropriate school staff of the potential benefits and side effects of providing personal hygiene.	This facilitates staff planning and permits reporting of any reactions to these treatment that they observe.
Summarize the student's need for and benefit (or lack of benefit) from personal hygiene procedures at school.	Give this information to his parents and physician as indicated in his health care action plan.
end	end

REFERENCES for Chapter 13. PERSONAL HYGIENE:

American National Red Cross. Family Health and Home Nursing. Garden City, NY: Doubleday & Company, Inc., 1979.

Brunner, L. S. and Suddarth, D. S. The Lippincott Manual of Nursing Practice, 4th edition. Philadelphia: J. B. Lippincott Company, 1986.

King, Eunice M., Lynn Wieck, and Marilyn Dyer. Illustrated Manual of Nursing Techniques. Philadelphia: J. B. Lippincott Company, 1977.

Zucker, Elana D., ed. Being A Homemaker/Home Health Aide. Bowie, MD: Robert J. Brady Co., Prentice-Hall Publishing, 1982.

PREVENTION OF DECUBITUS ULCERS

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, health clerk, teacher, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Prevention care to be taught by the school RN, physical therapist, occupational therapist, or physician.

Appendix A

PROCEDURE

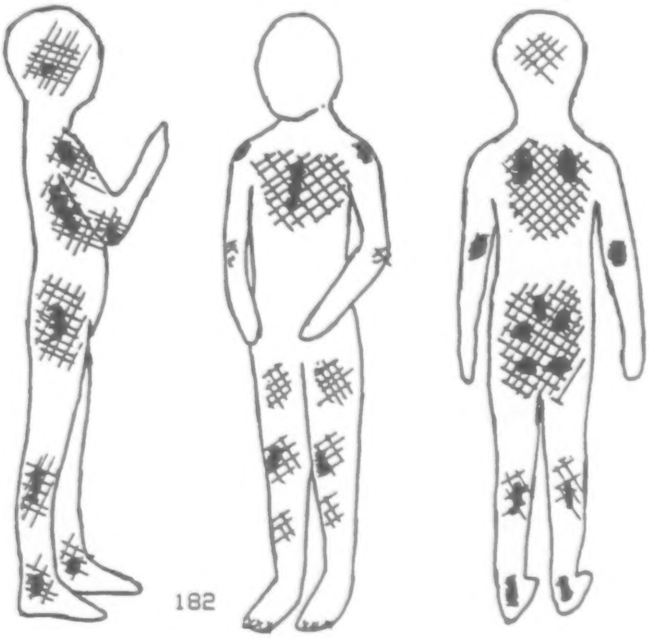
Definition: A localized area of skin that has broken down from too much pressure on a body part leading to impaired circulation and death of underlying tissue. This most often occurs in skin over a bony prominence.

Purpose: To make the student comfortable; to interrupt the destructive process by minimizing pressure on any one area of the body.

Equipment: As ordered.

Steps	Notes
Observe the student regularly at school to determine if pressure areas are developing.	Refer to physician's orders and student health care action plan.
Change the student's position at least every two hours. Wheelchair students should shift weight every 15 minutes. Even 5 minutes of pressure relief can be of benefit; longer is better.	Encourage him to do this himself if possible, or to keep track of the time (set an alarm) and remind you.
Check the student's skin whenever he is repositioned.	Examine the area most recently under pressure.
Look for: a patch of pale skin	

Steps	Notes
Look for (cont.)	
hyperemia - an area of reddened, warm, and tender skin that blanches white on pressure.	develops within 30 minutes of pressure application and clears within 1 hour of pressure relief.
ischemia - an area of reddened, warm and tender skin that does not blanch on pressure.	develops with pressure of 2-6 hours duration and takes 36 or more hours to clear after pressure relief.
necrosis - dusky, blue grey area which fails to blanch on pressure.	tissue impairment which begins after 6 hours of pressure.
ulceration - any blistering of or break in the skin.	tissue destruction may involve muscles and bone as well as soft tissue.
Keep the student's skin clean and dry. Wash skin with mild soap, rinse and blot dry with a soft towel; lubricate skin with an emollient lotion and be sure it is rubbed into the skin.	
Massage intact pressure areas frequently and carefully; be gentle, not rough. Most likely areas are: ischial tuberosities (buttocks), trochanters (hips), sacrum (tail bone), knees, malleoli (ankles), heels, elbows, ears.	This can be dry massage or with lotion. Stimulates circulation and reduces edema.



Steps	Notes
Position the student to relieve pressure. Encourage use of gel-type flotation pad, natural and synthetic fleeces, waterbeds and water filled seats.	Avoid elevating head of cot more than 30°; avoid rubber rings or doughnuts; avoid plastic covered seats and mattresses which do not allow evaporation of moisture from the skin.
Keep protective pads and clothing, including underwear, clean and dry and free of wrinkles.	Friction and moisture irritate the skin, making it more susceptible to damage.
Use care not to drag the student when moving him and when providing and removing the bedpan.	Shearing forces are created by friction that pull and stretch tissue and injure blood vessels and tissue.
Encourage good nutrition and adequate fluid intake; avoid overweight and underweight.	This is essential to skin health. A high protein, high calorie diet is frequently recommended. Food supplements and added vitamins and minerals may be needed.
Check the folds of the body for signs of skin breakdown.	Obese student may develop decubiti from friction where body parts rub together or where moisture is trapped, such as under the breasts, between the folds of the buttocks, between the thighs.
Provide for exercise, both passive and active.	Improves muscular, skin and vascular tone.
Initiate bowel and bladder training programs to manage incontinency.	Help keep the skin dry and clean.
Make sure assistive and adaptive devices are properly fitted.	
Be aware of signs of infection.	Lowers skin resistance to breakdown.
Notify parents and physician of any skin breakdown.	
Document your observations and interventions to prevent pressure sores on the student's health record or treatment log.	Record date and time, what you observed, what you did and why you did it, results of your action, student's reaction to and participation in the procedure, any problems.

Steps	Notes
Inform the appropriate school staff of the potential benefits of preventing decubitus ulcers.	This allows the staff to plan to optimize the student's performance and to support the prevention program.
Summarize the student's and staff's efforts to prevent decubitus ulcers at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

CARE OF DECUBITUS ULCERS

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Care of decubitus will not usually be delegated by the school RN when there is no evidence of granulation or healing.

REMARKS:
Requires prescription from the physician.

Appendix A

PROCEDURE

Definition: A localized area where skin and underlying tissue have been destroyed by pressure.

Purpose: To restore circulation and tissue function; to relieve all pressure on that area; to prevent destruction of underlying structures.

Equipment: As ordered.

Steps	Notes
Observe the student to determine the need for decubital ulcer care at school.	Review physician's orders and student's health care action plan.
Tell the student what you will be doing and how he can help.	Use developmentally appropriate language. Have the student do as much for himself as possible.
Wash your hands before caring for the student; have the student wash his hands. Use gloves when indicated.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Keep all pressure off the damaged area.	The area cannot heal under pressure.

Steps	Notes
Continue all preventive measures.	
Provide wound irrigations or compresses if ordered.	Follow physician's orders.
Help to control infection by: regular systemic assessment, administering prescribed medication, keeping the student clean and dry.	Student may need to be excluded from school if his wound is infected and draining and his cultures do not show response to antimicrobial therapy.
Help improve circulation by: exposing the ulcer to air and light, using gentle massage around the ulcerated area.	Provide for privacy if needed.
Provide nutrition supplements as ordered.	To promote healing and general health.
Administer topical treatments as ordered. Topical treatment might be: skin barrier antiseptic plastic spray corticosteroid and antibiotic spray absorbable gelatin sponge (Gelfoam) enzymatic debriding agents (collagenase therapy) transparent adherent dressing dextranomer (Debrisan) absorption dressing (copolymer starch)	Follow physician's orders. Know the expected outcome and precautions for the treatment being used.
Remove and discard your gloves, if worn. Wash your hands; have the student wash his hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document decubitus ulcer care on the student's health record or treatment log.	Record date and time, what was done and why, the result of the treatment, the student's participation in and reaction to the procedure, any problems.
Inform the appropriate school staff of the potential benefits and side effects of caring for decubitus ulcers.	This allows the staff to plan to optimize the student's performance and to report any reactions from the therapy that they observe.

Steps	Notes
Summarize the treatments provided and the apparent benefit (or lack of benefit) from receiving decubitus ulcer care at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

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POSITIONING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
Physical therapist, school RN, occupational therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Positioning will not usually be delegated by the school RN when there is evidence of skin breakdown and/or pain on movement.

REMARKS:
Adequate equipment and space in school buildings must be available. Positioning to be taught by physical therapist, school registered nurse, occupational therapist.

Appendix A

PROCEDURE

Definition: Turning, lifting and moving the student.

Purpose: To make the student comfortable; to maximize use of a bodily part; to prevent complications from lengthy immobility; to give tactile stimulation; to improve respiration and circulation.

Equipment: Varies with procedure used.

Safety Considerations

Plan the position change carefully.
Review the plan with the student and your helper.
Lock any wheels on both the device the student is in and the one to which he is transferring.
Unfasten any straps and buckles on his equipment.
Transfer urinary drainage bags and IV standards.
Reposition oxygen and other equipment.
Use a safety belt around the student.
Be sure you can do this procedure alone or have an assistant available before you begin.
Use verbal cues to coordinate movement.
Once the student has been repositioned be sure to refasten all straps and buckles needed to make the student safe and secure. Check all drainage and IV equipment to see it is positioned properly and functioning.

Steps	Notes
Observe the student to determine the need to change his position at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language and demonstration.
Assemble the needed equipment.	Will vary with the task at hand. Talk with his parents to learn what is used at home.
Have adequate help to ensure the safety of the student and the staff.	Will vary with the size and weight of the student, how much he can assist, the procedure, the size and strength of the staff person.
Do a "dry run" with the student and helper before attempting to actually move the student.	
Follow the principles of good body mechanics when lifting or moving the student (listed on next page).	Protect your back.
Follow the principles of good body alignment when positioning the student (listed on next page).	Prevent deformities.
Know how the equipment works before you try to use it or place the student in it.	Absolutely essential.
Wash your hands.	Refer to Appendix B. Handwashing.
Change the student's position.	You may need to move him in on or to a cot; reposition him in his chair; transfer from car to wheelchair; transfer from cot to chair or chair to toilet; place him in a supportive sitting or standing device; or as ordered.
Make sure he is comfortable and safe.	Remain with him until he has become accustomed to the new position.
Wash your hands. Clean and store equipment, if appropriate.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.

Steps	Notes
Document the procedure used to change the student's position on his health record or treatment log.	Record date and time, why the procedure was done, what was done, who assisted, the student's participation in and reaction to the procedure, any problems.
end	end

Principles of Good Body Mechanics

When a physical effort is needed, use as many muscle groups as possible.

Keep your body aligned properly with your back straight (not rigid), your knees bent and your weight evenly balanced on both feet.

Provide a broad base of support for your movements by having your feet at least 12 inches apart.

Stand close to the object to be lifted.

Get help to lift a large or heavy load.

When you must move a heavy object alone, it is safer for your back to pull it, roll it or push it, rather than attempt to lift and carry it.

Use a verbal count to coordinate movements with your helper or the student; then lift smoothly, not jerkily.

Breathe during the effort; do not hold your breath.

To change the direction of your movement pivot with your feet, turn with short steps, and turn with your whole body without twisting your upper torso.

Use your leg muscles to lift, not your back muscles; use your arm muscles to support the load.

Avoid twisting your body and the student's body as much as your can.

Principles of Good Body Alignment

Supine Position
(lying horizontal on his back)

Principle	Notes
The head is in line with the spine both laterally and front to back.	Place a pillow under his head so that it reaches under his shoulders.
The trunk is positioned so that flexion of the hips is minimized.	Place a small pillow or flat pad under the small of the student's back, if it is comfortable for him.
The arms are flexed at the elbow with the hands resting against the lateral abdomen.	Position the student's arms comfortably at his side with his hands open; use a hand roll if needed.
The legs are extended in a neutral position with the toes pointed toward the ceiling.	Support the feet by using a vertical foot support so that the student can brace his feet and keep them upright.
The heels are suspended in a space between the cot and the footboard.	Place a small pillow or pad under the student's ankles to prevent pressure on the heels.
Trochanter (hip) rolls are placed under the greater trochanters in the hip joint area.	Place small pillows or rolled bath towels alongside the hips to prevent the legs from turning outward.

Lateral Position
(lying on either side)

Principle	Notes
The head is in line with the spine.	Place one pillow under the student's head.
The body is in alignment and is not twisted.	Place a pillow at the student's back, lengthwise, and anchor it by pushing the edge of the pillowcase under his back. Fold the outer side of the pillow under and tuck it in snugly against the student to give more support if needed.

Principle	Notes
The uppermost hip joint is slightly forward and supported in a position of slight abduction.	Flex the hip and knee of the student's upper leg, bringing the leg forward so that it does not rest on the lower leg; position the lower leg comfortably. Place a pillow lengthwise under the upper leg being sure it extends well under the foot and ankle to provide support and keep them level.
Flex the arm at both the elbow and the shoulder joints.	Make sure the lower arm is in a comfortable position; place the upper arm and hand on a pillow having the elbow and shoulder flexed; use a hand roll if needed.

Prone Position

(lying horizontal on his abdomen)

Principle	Notes
The head is turned laterally and is in alignment with the rest of the body.	Turn the student's head to the side and place it on a small, flat pillow.
The arms are abducted (slightly away from the body) and externally rotated at the shoulder joint; the elbows are flexed.	Place the student's arms at his side; use hand rolls if needed; place small foam pads or pillows under his shoulders if needed.
A small flat support is placed under the pelvis (hips) extending from the level of the umbilicus to the upper third of the thigh.	Place a flat pillow under the student's abdomen to keep the spine in good alignment and help breathing.
The lower extremities remain in a neutral position.	Comfortably extend the student's legs.
The toes are suspended over the edge of the cot.	Either position the student to allow his toes to hang over the end of the cot or place a pillow under his ankles to support his feet so that his toes do not touch the cot.

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RANGE OF MOTION

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
Physical therapist, school RN, occupational therapist, adaptive P.E. teacher, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Exercises, including range of motion and prescribed exercise program, will not usually be delegated by the school RN when there is evidence of pain or restrictive movement.

REMARKS:
Requires prescription from the physician.

Appendix A

PROCEDURE

Definition: To exercise a joint to the extent of its range in all appropriate directions. Passive range of motion exercises are done for the student. Active range of motion exercises are done by the student. Assistive range of motion exercises are done by the student with help from an individual or an assistive device. Resistive range of motion exercises are done by the student against a weight or opposing pressure.

Purpose: To keep the joints flexible; to minimize joint deformity and limitation; to increase circulation; to improve muscle tone.

Equipment: None.

Steps	Notes
Determine the need for range of motion exercises at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you are going to do and how he can assist.	Use developmentally appropriate language and demonstrations.

Steps	Notes
Arrange for privacy.	Use a portable screen if available.
Wash your hands.	Refer to Appendix B. Handwashing.
Begin the prescribed range of motion exercises: Position the student in the supine position (lying horizontally on his back) with good body alignment;	Some common range of motion exercises are listed below. If active exercises are ordered observe the student's execution and routine.
Hold the extremity at the joint with one hand while slowly, smoothly and gently moving the joint through its range.	
Move only to the point of pain or resistance. DO NOT FORCE MOVEMENT!	
To overcome muscle spasm, move the joint slowly to the point of resistance and then exert gentle, steady pressure until the muscle relaxes.	
Following a consistent order move all joints; repeat each prescribed exercise 3 to 5 times or as ordered.	
Reposition the student for comfort.	Have the student resume his scheduled classroom activities.
Wash your hands.	Refer to Appendix B. Handwashing.
Document range of motion exercises on the student's health record or treatment log.	Record date and time, what procedures were done, the student's participation in and reaction to the exercises, any change from last time, any problems.
end	end

Some Common Range of Motion Exercises

Shoulder Flexion

With the student's elbow straight, raise his arm over his head, then lower it. Keep his arm in front of him the whole time.

Shoulder Abduction and Adduction

With his elbow straight, raise his arm over his head, then lower it. Keep his arm out to the side the whole time.

Internal and External Shoulder Rotation

Bring his arm out to the side; do not bring his elbow all the way to shoulder level. Turn his arm back and forth so the forearm points down toward his feet, then up toward his head. With his arm alongside his body and his elbow bent at 90°, turn his arm so the forearm points across his stomach, then out to the side.

Horizontal Abduction and Adduction of the Shoulder

While keeping his arm at shoulder level, reach across his chest past his opposite shoulder, then reach out to the side.

Elbow Flexion and Extension

With his arm alongside his body, bend his elbow to touch his same side shoulder, then straighten his elbow out again.

Forearm Pronation and Supination

With his arm alongside his body and his elbow bent to 90° turn his forearm so the palm faces first toward his head, then toward his feet.

Wrist Flexion and Extension

Bend his wrist up and down. Bend his wrist back and forth, and in a circle.

Finger Flexion and Extension

Close his hand into a fist, then straighten his fingers out as a unit.
Touch the tip of each finger to its base, then straighten each finger in turn.

Finger Adduction and Abduction

With his fingers straight, squeeze his fingers together, then spread them apart.

Finger-Thumb Opposition

Touch his thumb to the tip of each finger to make a circle and then open his hand fully between touching each finger.

Hip-Knee Flexion and Extension

Bend his knee and bring it up toward his chest, keeping his foot off the cot; lower his leg to the cot, straightening the knee as it goes down.

Quad Sets (active only)

With his leg flat on the cot, have the student tighten his thigh muscles to straighten his knee, HARD, pushing it into the cot. Hold for a count of 5, then relax. Repeat with a rolled towel under the knee.

Straight Leg Raising

Keeping his knee straight, raise his leg up off the cot; return the leg slowly to the cot again keeping the knee straight.

Hip Abduction and Adduction

With his leg flat on the cot and his knee kept pointed to the ceiling, slide his leg out to the side, then slide it back to midline.

Hip Internal and External Rotation

With his legs flat on the cot and his feet apart, turn both legs so the knees face outward, then turn them in so the knees face each other.
With one knee bent and that foot flat on the cot, turn that leg so the knee moves out to the side, then inward across the other leg.

Bridging (active only)

With both knees bent up and his feet flat on the cot, have the student push on the cot with his feet to raise his hips off the mattress. Hold for a count of 5, then relax.

Hip Extension

With the student lying on his side, hold his upper leg straight and move it backward as far as possible.

Ankle Dorsiflexion and Extension

Bend his ankles up, down and from side to side.

Ankle Inversion and Eversion

Turn his foot so the sole faces toward the midline, then turn his foot so the sole faces out away from the body.

Toe Flexion and Extension

Bend and straighten his toes.

CARRY OUT
PRESCRIBED EXERCISE PROGRAM

Steps	Notes
Verify the need for the student to have a prescribed exercise program at school.	Review the physician's orders and the student's health care action plan.
Be absolutely certain you know how the exercise should be performed. Arrange for a demonstration by the student's physical therapist or physician.	This may include range of motion, but focus on additional prescribed exercises.
Know the intended result of the prescribed exercise: building or maintaining muscle mass, increasing strength or endurance, etc.	Know the indicators for stopping or reducing the frequency of the exercise.
Tell the student what you will be doing and how he can help. If this is an active exercise program, tell him what he will be doing.	Use developmentally appropriate language and demonstration.
Arrange for privacy if needed.	
Gather any equipment needed.	As ordered.
Wash your hands.	Refer to Appendix B. Handwashing.
Carry out the prescribed passive exercise program.	Observe the student's active exercise program; assist as ordered.
Have the student resume his scheduled classroom activities.	
Document performing the exercise program on the student's health record or treatment log.	Record date and time, what exercises were done by whom, number of repetitions, how long they took, the student's reaction to the exercise program, any problems.
══end══	══end══

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ASSIST WITH CRUTCHES, WALKER, CANE, WHEELCHAIR and SCOOTER BOARD

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
Physical therapist, school registered nurse, occupational therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

REMARKS:
Availability of appropriate equipment in school buildings.
A prescription may be required from the physician.

Appendix A

ASSIST WITH CRUTCHES

Definition: A crutch is a support used as an aid in walking, most often used in pairs.

Purpose: To promote mobility and independence; to prevent injury to an affected limb.

Equipment: Adjustable crutches, rubber crutch tips, axillary arm pads, safety waist belt, tape measure, or as ordered.

Crutch Gaits

Gait: 4-Point alternate crutch gait
Description: a slow but stable gait; can only be used by the student who can move each leg separately and bear considerable weight on each of them
Sequence: right crutch; left foot; left crutch; right foot.

Gait: 2-Point alternate crutch gait
Description: slightly faster, but requires more balance than 4-point gait
Sequence: right crutch and left foot; left crutch and right foot.

Gait: 3-Point gait
Description: fairly rapid, but requires more strength and balance since the arms must support the entire body weight
Sequence: both crutches and the weaker extremity are moved forward simultaneously; then the stronger extremity is moved forward while putting most of the body weight on the arms.

Gait: Tripod crutch gaits
Description: slow and labored while maintaining tripod position
Sequence: **Tripod alternate crutch gait** right crutch; left crutch; drag body and legs forward
Tripod simultaneous crutch gait both crutches; drag body and legs forward.

Gait: Swinging crutch gaits
Description: both legs are lifted off the ground simultaneously and swung forward while the student pushes up on the crutches
Sequence: Swinging-to gait bear weight on good leg; advance both crutches forward simultaneously, while leaning forward, swing the body to a position even with the crutches
Swinging-through gait advance both crutches forward; lift both legs off the ground and swing forward landing in advance of the crutches; bring crutches forward rapidly to prevent being caught off balance.

Steps	Notes
Determine the need for assistance with crutches at school.	Review the physician's orders and the student's health care action plan.
Obtain a consultation with the physical therapist if you are unfamiliar with procedures for using crutches.	The physical therapist can assist and facilitate implementing the physician's orders for ambulation.
Teach the student strengthening exercises--	As ordered by the physician.
a) Ambulation exercises may include: quadriceps setting gluteal setting	If you are unfamiliar with these exercises ask for a demonstration from the physical therapist or physician.
b) Exercises for upper extremities and shoulders may include:	As ordered by the physician.
flexing and extending the arms slowly while holding weights doing pushups while lying prone squeezing a rubber ball sitting pushups dry land breast stroke	If you are unfamiliar with these exercises ask for a demonstration from the physical therapist or physician.

Steps	Notes
Check the crutches for appropriate length when he is standing erect.	When the tip is 4 inches in front of and 6 inches to the side of his toes, the armpiece should be 2 inches from the axilla.
Teach the student the tripod stance to stand with balance and stability.	Wearing well-fitted, low heeled and rubber soled shoes, stand with feet slightly apart and crutches placed 8 to 10 inches in front of and to the side of his toes.
Check the hand piece so that the student's elbows have a 20 to 30° of flexion when the arm piece is 2 finger widths below the axilla.	Prevent brachial nerve paralysis by showing him how to extend and stiffen his elbows in order to place his body weight on his palms, never on his axilla.
Use the axillary arm pad only if ordered by the physician.	Even though the axillary arm pads lessen pressure on the inside of the upper arm and the thoracic wall their use may encourage the student to rest on them and not put pressure on his hands.
Check to see the crutches are labeled with the student's name.	
Verify that the student is using the crutch gait prescribed by the physician.	Gait varies with the type and severity of the disability, the student's general condition, strength of arm and trunk, extent of balance.
Teach the selected crutch gait.	Use a safety waist belt until the student is competent.
Teach stair climbing:	Remember that "the good go up and the bad go down".
a) To go up stairs	Advance the good leg up to the next step, then the crutches and finally the weaker leg.
b) To go down stairs	Place the crutches on the next lower step; then lower the weaker leg and finally step down with the good leg.

Steps	Notes
Arrange for the student to have a pass to use the school elevator.	If elevator is available. Lessens possibility of injury to student or others on the stairs.
Teach safety points:	
a) Make sure rubber crutch tips are in good repair.	They should be wide and provide good suction; replace promptly if worn.
b) Check screws and nuts often.	They loosen with hard use.
c) Have a designated place in the classroom for the crutches.	They could be a safety hazard for other students and staff.
d) Keep hands free to handle the crutches.	Use a backpack to carry "stuff".
e) Arrange for the student to leave each class 5 minutes early.	This allows him to be clear of the hall during regular passing period.
end	end

ASSIST WITH WALKER

Definition:	A framework used to support a convalescent or disabled individual while walking.
Purpose:	To provide more stability than either a cane or crutch; to enable the person to begin ambulation.
Equipment:	As prescribed.

Steps	Notes
Determine the need for assistance with a walker at school.	Review the physician's orders and the student's health care action plan.
Arrange for a consultation with the physical therapist if you are unfamiliar with the procedures for using a walker.	The physical therapist can assist and facilitate implementing the physician's orders for ambulation.
Tell the student what you will be doing and how he is to assist.	Use developmentally appropriate language and demonstration.

Steps	Notes
Verify that the student is using the type of walker prescribed by the physician.	Standard walker is a rigid framework but adjustable in height Mobile walker has wheels on the legs to roll forward Rollator walker has wheels in the front and rubber tipped legs in the back Swivel-type walker is hinged so that the right and left side move independently
Check the walker for appropriate height.	Have the student stand erect in line with the rear legs of the walker; his elbows should be flexed about 30° when his hands are on the grips.
Teach the student to walk using the walker.	Place the walker forward less than an arms length; take a step with each leg; the student's body should not be in contact with the front cross bar.
Do not allow the student to use the walker on stairs.	The walker cannot safely be used on stairs and inclines.
Arrange for the student to have a pass to use the school elevator.	If elevator is available. Without an elevator student may need to have all classes on the ground floor.
Teach safety points:	
a) Make sure rubber walker tip(s) are in good repair.	They should be wide and provide good suction; replace promptly if worn.
b) Check screws and nuts often.	They loosen with hard use.
c) Have a designated place in the classroom for the walker.	It could be a safety hazard for other students and staff.
d) Keep hands free to maneuver the walker.	Use a backpack to carry "stuff".
e) Arrange for the student to leave each class 5 minutes early.	This allows him to be clear of the hall during regular passing period.
end	end

ASSIST WITH CANE

Definition:	A stick used as an aid in walking, usually for a person with one-sided weakness.
Purpose:	To lessen the force on weight bearing joints; to give lateral balance while walking; to produce forward momentum or forward restraint during ambulation.
Equipment:	As prescribed.

Steps	Notes
Determine the need for assistance with a cane at school.	Review the physician's orders and the student's health care action plan.
Obtain a consultation with the physical therapist if you are unfamiliar with the procedures for using a cane.	The physical therapist can assist and facilitate implementing the physician's orders for ambulation.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language and demonstration.
Verify whether the student will use one or two canes.	As ordered by the physician. Two canes are used when the student needs more support but less then crutches.
Confirm the type of cane and the type of handle the student should be using.	As ordered by the physician. Canes are straight, quad, 4-point and folding. Handles are pistol grip, T-grip, knobbed and shepherd's crook
Check the fit of the cane for the student's height.	Have him stand with the elbow on his stronger side flexed in a 30° angle; have the cane tip 6 inches to the side of his little toe; the handle should be approximately level with the greater trochanter (hip).
Teach the student to walk with a cane: Hold the cane on the stronger side Keep the cane fairly close to the body to avoid leaning on it Simultaneously advance the cane and the weaker leg	As ordered by the physician. If he cannot hold the cane with the hand opposite the weak leg, he can hold it on the same side as the weak leg and advance both cane and weak leg together.

Steps	Notes
Teach the student to go up stairs: Step up with the stronger leg Then bring the cane and the weaker leg to that stair;	As ordered by the physician. Remember that "the good go up and the bad go down".
and to go down stairs: Place the cane and the weaker leg on the lower stair Step down with the stronger leg.	
Arrange for the student to have a pass to use the school elevator.	If elevator is available. Lessens possibility of injury to student or others on the stairs.
Teach safety points:	
a) Make sure rubber cane tip(s) are in good repair.	They should be wide and provide good suction; replace promptly if worn.
b) Check screws and nuts often.	They loosen with hard use.
c) Have a designated place in the classroom for the cane.	It could be a safety hazard for other students and staff.
d) Keep hands free to maneuver the cane.	Use a backpack to carry "stuff".
e) Arrange for the student to leave each class 5 minutes early.	This allows him to be clear of the hall during regular passing period.
end	end

ASSIST WITH WHEELCHAIR

Definition:	A chair mounted on a frame with 2 large wheels in back and 2 smaller wheels in front for use by an ill or disabled individual.
Purpose:	To transport a person who cannot or should not walk; to provide mobility and independence for a non-ambulatory individual.
Equipment:	As ordered.

Steps	Notes
Determine the need for assistance with a wheelchair at school.	Review the physician's orders and the student's health care action plan.

Steps	Notes
Verify that the school is fully wheelchair accessible.	If only the ground floor is wheelchair accessible, all the student's classes will have to be on that floor.
Obtain a consultation with the physical therapist and/or the wheel- chair company.	The wheelchair must be ordered or made to the correct size to fit the student and his disability.
Obtain a consultation with the physical therapist if you are unfamiliar with the procedures for using a wheelchair.	The physical therapist can assist and facilitate implementing the physician's orders for a wheelchair.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language and demonstration.
Position the wheelchair next to the cot at a 45° angle; lock the wheels.	Place the wheelchair so that he will move toward his strongest side.
Wash your hands.	Refer to Appendix B. Handwashing.
Move the student to the side of the cot.	
a) Bring his head and shoulders toward the edge of the cot.	Have the student do as much of the maneuver as he safely can.
b) Bring his feet and legs to the edge of the cot; he is now in a ∩ position.	
c) Slide both your arms under his hips, then straighten you back while bringing him toward you.	Pay attention to your body mechanics to protect your back.
Sit the student on the edge of the cot.	
a) Roll the student on his side, facing you; bend his knees.	Have the student do as much of this maneuver as he safely can.
b) Reach one arm over to hold him in back of his knees.	
c) Place your other arm well under his neck and shoulder area.	
d) On a verbal cue shift your weight to your leg nearer the foot of the cot while swinging the student's legs over the edge of the cot and pulling his shoulders to a sitting position.	Position your feet with a wide base of support and lower your center of gravity by bending your knees.
e) Remain in front of him with both of your hands supporting him.	Allow him to sit for 2 minutes while you observe to orthostatic hypotension, dizziness, etc. Do not leave him until you are sure he is stable.

Steps	Notes
Assist the student to stand.	
a) Lock wheelchair wheels.	Make certain he can safely weight bear.
b) Tell the student to move to the front of the cot or chair and put his hands on the chair arms or cot edge.	Have the student do as much of the maneuver as he safely can.
c) Place one of your knees between his knees; if he has a weak knee, brace it with your knee.	You should be close to the cot or chair with your feet providing a broad base of support.
d) Tell the student to put his stronger foot slightly under him.	
e) Bend you knees and lean slightly forward so you can put your arms around his waist.	
e) Tell the student that on the count of 3, he is to push down with his arms, lean forward and stand up.	Be sure to use a verbal cue so you can work together.
f) Hold him closely.	
g) On the count of three, rock your weight to your back foot bringing him forward to standing.	
h) Have him lock his knees.	
i) Give him time to balance himself, then pivot him slowly until his back is toward the chair.	
Assist the student to sit in a wheelchair	
a) Lock the wheelchair wheels.	
b) Remind the student to feel the chair with the back of his legs.	Have the student do as much of this maneuver as he safely can.
c) Tell him to reach back for the arms of the chair.	
d) Shift your weight to your forward leg and guide him as he bends his knees and sits in the chair.	Place his buttocks at the back of the chair seat.
e) Make sure he is safe and secure.	Use a seatbelt/harness if needed.
Assist the student to use a transfer (sliding) board	
Definition: A transfer board is a polished light-weight board used to bridge the gap between cot and chair or any transfer space.	**Purpose:** To allow the student to transfer when the muscles needed for lifting him off the cot/chair are not strong enough to lift his body weight.
a) Place one side of the board under his buttocks; place the other side on the surface to which he is going.	

Steps	Notes
b) Tell him to push up with his hands, shift his buttocks, and slide or wiggle across the board and off the other end.	
Teach wheelchair safety points:	
a) Regularly check the rear wheels for movement with the brakes locked.	Brakes become ineffective when they are out of alignment; fix them.
b) Make sure the seatbelt is fastened.	Ask for assistance if needed.
c) Both feet should be on the footrests.	Ask for assistance if needed.
d) Arms and legs must be within the width of the chair when going through a doorway.	
e) Always lock the brakes when the wheelchair is stopped.	Even if it is empty.
f) Always push at a walking speed. DON'T HOT ROD!	Take extra caution on gravel, grass, or uneven ground because the front wheels can get stuck, making the chair tip forward.
g) Never tilt the wheelchair way back, turn sharply or stop too rapidly.	
h) Back a wheelchair down ramps and curbs.	Be sure both wheels go over the curb together so the chair doesn't tip.
i) Push a wheelchair forward going up ramps and curbs.	Tip the chair back just enough for the front wheels to clear the curb.
j) Always hold on to the wheelchair when pushing it.	
k) Arrange for the student to leave each class 5 minutes early.	This allows him to be clear of the hall during regular passing period.
end	end

ASSIST WITH SCOOTER BOARD

Definition: A 4-wheeled, hand propelled mobility device for prone (flat on abdomen) movement of a child in a cast; or a child with developmental delays or trunk/extremity weakness.

Purpose: To encourage trunk and neck extension; to start weight bearing on hands; to strengthen arm muscles; to assist learning to crawl.

Equipment: As ordered to fit the individual student.

Steps	Notes
Verify the need for the student to use a scooter board at school.	Refer to the physician's orders and the student's health care action plan.

Steps	Notes
Arrange for a consultation with the physical therapist if you are unfamiliar with procedures used with a scooter board.	The physical therapist can assist and facilitate implementing the physician's orders for mobility.
Determine if the scooter board is the correct size for the student.	As ordered by the physician. **Length:** measure from the top of his head to 1 to 2 inches above his ankle. This allows his feet to hang over the end of the board. **Width:** measure from axilla to axilla. Usual board has parallel edges [], but may be wedge shaped ▲ to adequately support the weight of a student with a hip spica cast. **Height:** including the 4 inch casters, the board must be high enough to allow a 90° elbow bend when hands are flat on the floor for pushing and pulling.
Place the student on the scooter board and fasten the safety straps.	One or two straps are standard for safety.
Observe his ability to move at will.	
Change his position frequently.	At least every two hours.
Teach safety points:	
a) Use scooter board on a flat surface only.	It is not safe on an incline nor near stairs.
b) Use primarily in the classroom or gym.	It is not safe in the halls.
c) Student provides his own mobility.	Other students are not to push or pull him.
d) When not in use it is stored on its side against the wall with the casters facing out.	So other students aren't tempted to use it as a giant skate board.

DOCUMENTATION for Assisting with Ambulation

Document that you assisted the student with crutches, walker, cane, wheelchair or scooter board on the student's health record or treatment log.	Record the date and time, the type of assistance provided, why it was provided, length of time the student used the device, the distance covered, safety measures taught and observed, the student's reaction to this procedure, how much the student was able to do for himself, any problems.

Steps	Notes
Inform appropriate school staff of the potential benefits and side effects of using these assistive devices.	This allows the staff to plan to optimize the student's performance and to report any problems with using these devices that they observe.
Summarize the student's compliance with and apparent benefit (or lack of benefit) from using these assistive devices at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

REFERENCES for Chapter 17. AMBULATION:

American National Red Cross. Family Health and Home Nursing. Garden City, NY: Doubleday & Company, Inc., 1979.

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CASTS, BRACES AND PROSTHESES
Observation, Alignment, Functioning

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, physical therapist, occupational therapist, adaptive P.E. teacher, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Care of student with casts, braces and/or protheses will not usually be delegated by the school RN when there is evidence of impaired circulation, infection, pain, drainage or bleeding.

REMARKS:
May required a physician's prescription.

Appendix A

CAST

Definition: A solid mold of a part of the body usually applied directly to the involved part.

Purpose: To immobilize the body part in the desired anatomical position.

Steps	Notes
Observe the student with a cast at the start and end of each school day.	Review physician's orders and student's health care action plan.
Examine the limb(s) distal to the cast	Compare this area to other parts of his body not affected by the cast.
Skin color	-Should be the same as rest of the body
Capillary refill	-Press the nailbed firmly, then quickly release; the nail should turn pink again immediately. Compare the response in the matching limb.
Peripheral pulse	-Should be strong & equal bilaterally.
Skin temperature	-Should be warm & same as matching limb.

Steps	Notes
Swelling	-Should be none or lessening.
Bruising	-Should be none or lessening.
Movement of the digits	-At least as good as yesterday.
Drainage	-None
Odor	-None
The condition of the cast itself	
Color	-Remove soil with scouring powder on slightly moistened cloth; dry immediately. Usually done at home.
Intact	-Look for cracks, dents, chips.
Hard	-Check for soft spots from moisture.
Edges	-Not sharp or crumbly; may have petals of waterproof adhesive tape.
Objects inside the cast	-Pull skin taut; use a flashlight to look under the cast if he complains of pain or irritation.
Is the cast working as intended?	
Movement of the body within the cast	-Notify parent and physician if the cast has deteriorated or edema lessened so the body part is no longer immobilized.
Maintain appropriate activity level	-Is the student able to function adequately despite the cast?
Ask the student how he feels	
Pain	-May indicate pressure area formation
Pressure	-May result from swelling & edema
Sensation	-Numbness & tingling can mean nerve damage
Fever	-Infection; suspect decubitus ulcer.
Itching	-May be relieved by blowing cool air under the cast with hair dryer or asepto syringe.
Skin rashes	-Check for irritation, infection, contamination, infestation.
Diet	-Encourage good nutrition for healing; lots of fluids; keep food out of the cast.
Coping skills	-How is he managing Activities of Daily Living, transportation, outer clothing, etc.

Steps	Notes
Document your care of the student with a cast on his health record or treatment log. Notify his parents and/or physician of your concerns.	Record date and time, your assessment, your actions, student's actions and reactions, any problems.
end	end

BRACE

Definition: An appliance used to support a bodily part; an orthosis.

Purpose: To protect weakened muscles; to prevent and correct deformities; to contain involuntary muscle movements; to immobilize and protect a diseased or injured joint.

Steps	Notes
Observe the student with a brace at the start and end of the school day.	Review the physician's orders and the student's health care action plan.
Review health care action plan to determine if the brace can be removed at school.	When it cannot be removed at school you will have to notify the parents of you concerns and they will follow-up.
Examine the skin under the brace	-If permissible, remove the brace and skin covering.
No redness	-Replace the brace as needed.
Large area of redness on well padded skin	-Probably OK unless it is very red.
Small area of redness over a bony prominence	-Leave the brace off for 20 to 30 minutes.
Persistent redness over bony prominence	-Notify parents if redness lasts more than 30 minutes.
Blister or skin breakdown	-Do not use the device; notify physician and parents.
Examine the brace itself	
Deterioration	-Note worn areas, condition of straps and buckles, missing/loose screws.
Shoes	-Look at the condition of the heels and soles; the fit in general.
Breaks	-Look for stress fractures in the plastic; dents in the metal.
Cleanliness	-Remind student/parent to clean brace at night.

Steps	Notes
Check the fit and function	
Alignment with student's anatomy	-Look down the full length of the brace; mechanical joints should match body joints.
Do what it's supposed to do	-Know the reason a brace is being used; observe the student in action to see if he is able to achieve this function; if not, why not.
Determine the staff/student's ability to manage the brace	-Refer to student's health care action plan.
Don (to put on)	-Watch him put the brace on; skin is clean, dry and protected with a stocking, stockinette, T-shirt, etc.
Doff (to take off)	-Watch him take the brace off: pays attention to his skin.
Store the brace	-Out of the way, but accessible; not hung.
Care and repair of the brace	-Keeps brace away from heat and agents that could damage it.
Assess the student's ability to manage with a brace.	
Has his functioning changed over time?	-Improved or deteriorated; the same.
Are his activities appropriate to his abilities?	
Document your care of the student with a brace on his health record or treatment log. Notify parents and/or physician of your concerns.	Record date and time, your assessment, your actions, student's actions and reactions, any problems.
end	end

PROSTHESIS

Definition: An artificial replacement for a missing portion of the body.

Purpose: To replace a missing body part; to foster independence; to aid development and self care.

Steps	Notes
Observe the student with a prosthesis at the start and end of the school day.	Review the physician's orders and the student's health care action plan.

Steps	Notes
Learn the reason for the prosthesis	Trauma, birth defect, illness, other.
Learn about the specific prosthesis	Consult with physician, therapist, prosthetist, student, parent; read literature from manufacturer.
Share what you have learned with appropriate school staff.	Respect student's confidentiality; make sure staff have the information they need to help this student.
Determine if the prosthesis can be removed at school.	Review student's health care action plan and the physician's orders.
If it cannot be removed at school, notify the parents of your concerns.	They will follow-up at home.
Examine the skin covered by the prosthesis	-If there is a concern and if it is permitted, remove the prosthesis and skin covering.
No redness	-Replace the prosthesis as needed.
Large area of redness on well padded skin	-Probably OK unless it is very red.
Small area of redness over a bony prominence	-Leave the prosthesis off for 20 to 30 minutes.
Persistent redness over bony prominence	-Notify parents if redness lasts more than 30 minutes.
Blister or skin breakdown	-Do not use the device; notify physician and parents.
Examine the prosthesis itself	
State of repair	
Cleanliness	
Odor	
Determine the staff/student's ability to manage the prosthesis	
Don (to put on)	-Check the skin of the limb; apply stockinette before the prosthesis; align properly.
Doff (to take off)	-Remove for showers and swimming; follow student's health care action plan.
Gait and/or function, and fit	-Observe the prosthesis in use.

Steps	Notes
Assess the student's ability to manage with a prosthesis.	
How does he tolerate the prosthesis?	-Does he wear it regularly?
What is his activity level and involvement in school?	-Does he participate to the level of his ability?
What are his short and long term goals?	-Does he have things he wants to accomplish?
Document your care of the student with a prosthesis on his health record or treatment log.	Record date and time, your assessment your actions, student's actions and reactions, any problems.
Notify parents and/or physician of your concerns.	
end	end

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INTAKE / OUTPUT

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, occupational therapist, physical therapist, teacher, health clerk, secretary, specialized aide.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Monitoring intake and output will not usually be delegated by the school registered nurse when there is evidence of changes in the usual pattern.

REMARKS:
Availability of appropriate equipment.

Appendix A

PROCEDURE

Definition: The accurate measurement and recording of the fluids taken into the body and the fluids released from the body [I&O].

Purpose: To calculate the need to increase or decrease fluid intake; to help determine a diagnosis; to assess treatment effectiveness; to determine if the body is retaining fluids.

Equipment: Measuring containers, Intake & Output record.

Intake includes	Output includes
Anything liquid taken by mouth, including ice, custards, ice cream, gelatin.	Emesis (vomit)
	Urine
IV fluids, including hyperalimentation	Blood loss
Gastric and Nasogastric tube feedings	Drainage from incision and wounds
Irrigation fluids less the return	Gastric aspiration
Fluids given with and as medications	

Steps	Notes
Determine if intake and output needs to be recorded at school.	Review the physician's orders and the student's health care action plan.
Continue the I&O record started at home.	
Tell the student what you will be doing and how he can help.	Use developmentally appropriate language.
Communicate the need to keep accurate records to all the faculty and staff. Obtain their cooperation in this effort.	Send a memo; post a sign; make a tag for the student to wear; tell them. Have the student assume as much responsibility for this task as possible.
Determine the capacity of the student's dishes and glassware.	Mark the capacity on the item and keep a master sheet.
Make sure there is a bedpan and urinal available for the student's use, and a potty "hat" insert for the toilet.	Also a marked measuring container for urine.
Estimate output when necessary: -student is incontinent of urine -urine and stool are mixed in the bedpan -vomitus not in a container -menstrual blood -other bleeding -wound drainage -perspiration	Record -what substance you are estimating -what got wet from that substance -how wet (damp, saturated, dripping, etc.) -when
Record time, substance and amount for each item ingested and eliminated.	Use the same unit of measurement for both.
Complete the I&O sheet and send it home each day with the student.	Refer to the student's health care action plan.
Confer with the parent and physician frequently to decide whether to continue I&O or make other therapeutic arrangements.	Will depend on the student's physical condition, medications and prognosis.

Steps	Notes
Document measuring and recording I&O on the student's health record or treatment log.	Record date and summary of I&O, student's participation in and reaction to this procedure, any problems.
Notify parents and physician of gross discrepancies between intake and output.	
end	end

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URINE, STOOL, SPUTUM, BLOOD (finger stick)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Specimen collection will not usually be delegated by the school RN when there is evidence of infectious disease.

REMARKS:
Requires prescription from the physician.
Health care provider or parent/guardian provides an appropriate collection container and supplies. **WEAR GLOVES**!

Appendix A

URINE

Definition:	**Midstream clean catch urine specimen** is obtained without catheterization after cleansing around the meatus and then collecting the middle portion of the voided urine. **Sterile urine specimen** is obtained by sterile catheterization procedure or from an indwelling catheter.
Purpose:	To obtain an uncontaminated sample of the student's urine for testing.
Equipment:	Antiseptic soap solution or liquid soap, sterile water, 4x4s, bedpan or urinal if needed, sterile or disposable gloves, sterile specimen container with lid and label, sterile catheterization setup if needed, plastic lined waste container.

Steps	Notes
Determine with the parents if the urine specimen could be obtained at home rather than at school.	This is usually done at home. Review the physician's orders and the student's health care action plan.
If the urine specimen must be obtained at school, determine whether the specimen should be sterile or clean.	As ordered by the physician.

Steps	Notes
Determine whether the student should be on forced fluids, restricted fluids or regular fluid intake.	As ordered by the physician.
Tell the student what you will be doing and what he can do to assist; encourage the student to as much of this procedure for himself as he can.	Use developmentally appropriate language and demonstration.
Arrange for privacy.	Use bathroom with doors on the stalls or a portable screen.
Gather the needed equipment. Keep in mind the need to measure the urine if the student is on Intake and Output.	Arrange it conveniently near the student. The sterile collection container should have oz./ml. indications.
Midstream clean catch voided specimen	
Wash your hands; have the student wash his hands.	Refer to Appendix B. Handwashing.
Put on disposable gloves.	Refer to Appendix C. Handling Body Fluids.
For a male student -	
Retract the foreskin, if necessary.	Keep it retracted for entire procedure.
Using a circular motion and a fresh 4x4 with soap for each swipe, wash the area around the meatus.	To remove skin bacteria.
Using the same procedure, rinse the area thoroughly with water.	To remove chemical residue from soap.
Have the student begin to void; allow the first part of the flow to go into the toilet or urinal.	Initial urine flow removes debris from the urethra.
Collect the middle portion of the urine flow in the sterile container; do not allow the container to come into contact with the penis.	Try to fill the container at least half way to have sufficient urine for testing.
Have the student finish voiding in the toilet or urinal.	The end of the urine stream may contain prostatic secretions.

Steps	Notes
For the female student -	
Have the student spread her labia to expose the urinary meatus.	The labia need to remain separated for the entire procedure. This may be easier if she straddles the toilet facing backward or straddles the wide end of the bedpan.
Cleanse around the meatus using soap solution on 4x4s; cleanse from front to back discarding 4x4 after one swipe; wash first one side, then the other, then the midline.	To remove skin bacteria.
Rinse thoroughly with water on 4x4 following same procedure.	To remove chemical residue from cleanser.
Have the student begin to void and allow the urine to flow into the toilet or bedpan.	A forcible flow helps to cleanse the urethra of debris.
Catch the middle portion of the urine stream in the sterile container without allowing the container to touch her skin.	Try to have the container at least half full to have enough urine for testing.
Remove the container while she is still voiding and allow the remaining urine to go into the toilet or bedpan.	
For male and female students -	
Cover the container; wipe the outside; complete the label and fasten it to the container.	Unlabeled specimens will be discarded at the laboratory.
Send the specimen to the physician's office or laboratory as quickly as possible.	To ensure accurate testing. Refer to student's health care action plan to determine who is responsible for transporting the specimen (usually the parents).
If the urine is not sent immediately it should be refrigerated.	Follow physician's orders or laboratory manual.
Empty the bedpan or urinal. Wash and store.	Refer to Appendix C. Handling Body Fluids.

Steps	Notes
Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands; have the student wash his hands.	Refer to Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	
Document the collection of a midstream clean catch voided urine specimen on the student's health record or treatment log.	Record date and time, procedure used, amount and description of the urine obtained, the student's assistance with this procedure, the disposition of the specimen, any problems.
Sterile Urine Specimen Obtained when a student has an indwelling catheter in place.	USUALLY DONE AT HOME OR PHYSICIAN'S OFFICE!
Wash your hands; have the student wash his hands if he will be assisting with this procedure.	Refer to Appendix B. Handwashing.
Have the student assume a comfortable position as this will take a little time.	Only if ordered, you can clamp the drainage catheter for a specified period of time. This allows urine to collect in the bladder. At the end of the specified period, complete the steps to obtain the sterile specimen. Do not reclamp the tube.
Open sterile collection set; put on sterile gloves.	
Disconnect the catheter from the collecting tubing.	Do not contaminate the open end of the collecting tube; arrange it securely.
Hold the end of the catheter above the sterile collection container and allow urine to flow until you have obtained the required amount.	Do not touch the catheter to the container nor place the catheter in the container. This procedure takes time.
Wipe off the drainage tubing with alcohol or appropriate disinfectant.	
Reconnect the catheter to the drainage tubing.	Be sure not to contaminate the open ends. Follow student's health care action plan.

Steps	Notes
Cover the urine specimen; fill out the label and attach it to the container.	Unlabeled specimens will be discarded by the laboratory.
Remove and discard your gloves. Clean and store your equipment.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	
Send the urine specimen to the physician's office or laboratory as soon as possible; refrigerate if there will be any delay.	Follow the physician's orders and laboratory manual for instruction for storage; refer to the student's health care action plan to see who is responsible for transporting the specimen (probably the parent).
Document the collection of a sterile urine specimen from the student's indwelling catheter on his health record or log.	Record date and time, procedure used, amount and description of the urine, student's assistance with the procedure, disposition of the specimen, any problems.

Clean Urine Specimen - voided

Steps	Notes
Follow the instructions for midstream clean catch voided urine for preparation and cleansing.	Refer to student's health care action plan.
Collect all or any part of the voided urine in a clean container.	As ordered. If the student is incontinent, it may be necessary to use an external collection device or adhesive collection bag.
Complete the procedure as outlined for midstream clean catch voided specimen.	

Clean Urine Specimen - catheterized

Steps	Notes
Follow procedure for Clean Intermittent Catheterization.	See Chapter 9. Urinary Tract Care, Clean Intermittent Catheterization.
Collect all or part of the catheterized specimen in a sterile container.	As ordered.
end	end

STOOL

Definition: Stool specimen (feces, excreta, B.M., bowel movement) is a portion of the waste product generated by the intestinal tract.

Purpose: To obtain a sample of the student's feces for testing.

Equipment: For incontinent student - diaper or pad, cellophane or plastic liner, tongue blades, specimen container with lid and label; for student with bowel control - bedpan, toilet tissue, tongue blades, specimen container with lid and label; disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents if the stool specimen could be obtained at home rather than at school.	This is usually done at home. Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can assist; allow the student to do as much of the procedure as he can.	Use developmentally appropriate language and demonstrations.
Arrange for privacy.	Use bathroom with doors on the stalls or use a portable screen.
Gather the needed equipment.	Arrange it conveniently near the student.
For the student with bowel control	
Wash your hands; have the student wash his hands if he is to assist.	Refer to Appendix B. Handwashing.
Put on disposable gloves.	Refer to Appendix C. Handling Body Fluids.
Position the student on a clean, dry bedpan.	Refer to Chapter 10. Bowel and Bladder, Bedpan.
If no bedpan is available, use the toilet.	Float several layers of toilet tissue on the surface of the water in the toilet bowl, or follow laboratory instructions.

Steps	Notes
Remind the student not to urinate and to discard toilet tissue used for wiping in the plastic lined waste container.	Urine inhibits bacterial growth; toilet tissue may contain chemicals that can interfere with requested tests. Refer to physician's orders and laboratory manual.
When the student has finished moving his bowels, remove the bedpan or help him from the toilet, assist him with necessary hygiene and allow him to resume his scheduled classroom activities.	See Chapter 10. Bowel and Bladder, Bedpan.
Use tongue blades to take 1-2 tablespoon sample of stool and place it in the specimen container; cover with the lid; complete the label and fasten it to the container.	Observe the stool for blood, pus, parasites, mucus or anything unusual. If these are present, include them in the specimen.
For the incontinent student Check the student frequently to see if he has defecated.	Line a diaper or pad with plastic or cellophane to keep a watery stool from soaking into the fabric.
After the student has had a bowel movement, wash your hands and put on disposable gloves; remove the diaper.	Refer to Appendix C. Handling Body Fluids. See Chapter 10. Bowel and Bladder, Diapering.
Use tongue blades to remove a sample and place it in the specimen container.	Follow same protocol as with student with bowel control.
For all students Discard the tongue blades in the waste container. Clean and store the bedpan. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands; have the student wash his hands.	Refer to Appendix B. Handwashing.
Send the stool specimen to the physician's office or laboratory as soon as possible; refrigerate only if ordered.	Follow the physician's orders and the laboratory manual for instructions for storage; refer to the student's health care action plan to determine who is responsible for transporting the specimen (usually the parents).

Steps	Notes
Document the collection of a stool specimen on the student's health record or treatment log.	Record date and time; procedure used; description of the stool including approximate amount, color, odor, presence of blood, mucus, parasites, pus; student's assistance with collection; disposition of the specimen; any problems.
end	end

SPUTUM

Definition: **Sputum specimen** is a portion of the material raised from the lungs and bronchi by deep coughing.

Purpose: To obtain a sample of the student's pulmonary secretions for testing.

Equipment: Sputum container with lid and label, tissues, ultrasonic nebulizer and fluid if ordered, disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents if the sputum specimen could be obtained at home rather than at school.	**This is usually done at home or the physician's office.** Review the physician's orders and the student's health care action plan.
Tell the student what must be done; this procedure requires student cooperation and assistance.	Use developmentally appropriate language and demonstration.
Encourage the student to drink lots of fluids the day previous, unless contraindicated.	To loosen and thin secretions.
Arrange for privacy.	Use a portable screen if no separate facility is available.
Try to obtain an early morning specimen if possible.	Not usually possible at school, but early in the day is best.
Gather the needed equipment.	Arrange a clean work area near the student.
Have the student clear his nose and throat and rinse his mouth with water.	To decrease sputum contamination.

Steps	Notes
Wash your hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Prepare the ultrasonic nebulizer with the prescribed solution.	As ordered and if ordered.
Have the student breath through his mouth using the nebulizer the required length of time.	Inhale deeply and slowly usually for 10 to 20 minutes.
Have the student take several deep breaths, exhale and takes several short coughs.	Follow student's health care action plan.
Then cough deeply and expectorate the sputum directly into the container.	Saliva is not a sputum specimen.
Cover the specimen container; complete the label and fasten it to the container.	
Offer the student oral hygiene.	See Chapter 13. Oral Hygiene.
Have him wash his hands.	Refer to Appendix B. Handwashing.
Have the student resume his scheduled classroom activities.	
Send the sputum specimen to the physician's office or laboratory as soon as possible.	Follow physician's orders and laboratory manual for storage instructions, and the student's health care action plan to determine who is responsible for transporting the specimen (usually the parent).
Clean and store the ultrasonic nebulizer, if used. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document collection of a sputum specimen on the student's health record or treatment log.	Record date and time; procedure used; duration of the procedure; student's reaction to the procedure; description of the sputum including color, consistency, odor; disposition of the specimen; any problems.
═end═	═end═

BLOOD (finger stick)

Definition: Blood by finger stick is capillary blood obtained by skin puncture.

Purpose: To obtain a sample of the student's blood for testing.

Equipment: Sterile disposable blood lancet or automatic lancet, alcohol swab or appropriate disinfectant, dry sterile 2x2s, disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents if the blood specimen (finger stick) could be obtained at home rather than at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can assist.	Use developmentally appropriate language and demonstration.
Arrange for privacy.	Student may cry and need a place to recover his composure.
Gather your equipment.	Arrange it on a clean work area near the student.
Determine if you will need a helper.	Most students really dislike having their finger stuck and may be uncooperative.
Position the student comfortably. Examine the student's fingers tips for an appropriate site.	Do not choose an area that is cold, cyanotic or swollen. It may be necessary to apply warm, moist compresses to the area for about 10 minutes to dilate the blood vessels.
Wash your hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Cleanse the site with alcohol swab or appropriate disinfectant. Dry thoroughly with 2x2.	Remove skin pathogens. Remove alcohol as it will allow blood to run down the finger and could affect cell morphology.
Apply pressure to the finger at the distal joint until redness is produced at the tip.	To promote stasis of the blood.

Steps	Notes
Prick the finger sharply with the sterile disposable lancet -or- use an automatic lancet.	Use a lancet smaller than 2 mm and make the puncture perpendicular to the lines of the student's fingertip. Follow manufacturer's instructions for using an automatic lancet.
Release the pressure on the finger and hand.	Pressure will now act to constrict the flow of blood from the puncture.
Wipe away the first drop of blood with a 2x2.	To remove epithelial cells.
Do not squeeze or milk the finger to obtain blood flow.	Dilutes the sample with tissue fluid.
Hold the hand is a dependent position to facilitate blood flow.	
Obtain the required blood sample.	As ordered by the physician; usually for blood glucose or hematocrit.
Use a 2x2 to apply pressure over the puncture site until the bleeding stops.	A band-aid may be applied later as a badge of courage.
Have the student resume his scheduled classroom activities.	
Wipe up any spilled blood. Discard used lancets and 2x2s. Remove and discard your gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Test the blood specimen at school or send the to the physician's office or laboratory as soon as possible.	Refer to the student's health care action plan to determine who is responsible for transporting the specimen (usually the parent).
Document the collection of a blood specimen by finger stick on the student's health record or treatment log.	Record date and time; procedure used; amount of blood obtained; disposition of the specimen; student's reaction to this procedure; any problems.
end	end

REFERENCES for Chapter 20. SPECIMEN COLLECTION:

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Colorado Department of Health Community Nursing Section. MEMORANDUM: Recommended Guidelines for Blood/Body Fluid Borne Disease Precautions. Denver: Colorado Department of Health, January 6, 1988.

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URINALYSIS [UA]

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse, or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Urinalysis will not usually be delegated by the school RN when there is evidence of questionable results.

REMARKS:
If student is taught to self-test, monitoring will be done by designated school personnel.
Availability of appropriate supplies.

Appendix A

PROCEDURE

Definition: Examination of the urine.

Purpose: To screen for diseases of the urinary tract and kidneys; to help discover metabolic or systemic disorders distinct from renal disease.

Equipment: Container of freshly collected urine, reagent screening strips, reagent tablets and testing kits, paper cups, paper towel, watch with second hand, disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents if the urine testing could be performed at home rather than at school.	Review the physician's orders and the student's health care action plan.
At school a reagent strip or tablet urinalysis could be performed to check for glucose, protein, blood, ketone, pH, nitrite, urobilinogen, bilirubin.	A complete laboratory urinalysis includes microscopic examination of a slide for cells and casts, as well as chemical analysis.
Obtain a urine sample.	See Chapter 20. Specimen Collection, Urine.

Steps	Notes
Gather the needed equipment.	Parents will supply reagent strips or tablets. Choose an area near a sink and toilet.
Wash your hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Examine the urine:	
Amount	-measure the amount if ordered.
Appearance Clear (normal), turbid or cloudy	-turbid urine may contain red or white cells, bacteria, fat or chyle; may reflect renal infection.
Odor Faint aromatic (normal), food odors, ammonia odor, offensive odor	-fruity odor from formation of ketone bodies in diabetes mellitus, starvation, dehydration; fetid odor with infection.
Color Clear yellow or amber (normal), turbid or smoky, red or red-brown, yellow-brown or green-brown, orange-red or orange-brown, dark brown or black.	-varies with diet, drugs, metabolic or inflammatory or infectious diseases.
Specific gravity 1.005 - 1.030 (normal range)	-reflects the ability of the kidney to concentrate urine (not usually done at school).
pH Around 6 (normal), range from 4.8 to 7.8	-alkaline pH may result from Fanconi's syndrome, urinary tract infection, metabolic or respiratory alkalosis; acid pH may result from renal tuberculosis, pyrexia, phenylketon-uria, alkaptonuria, all forms of acidosis.
Protein None (normal), varying amount in systemic illness	-proteinuria suggests renal disease; also present in systemic diseases that affect the kidney.
Sugars None (normal), varying amount in systemic illness	-glucosuria usually indicated diabetes mellitus but may result from increased intracranial pressure, Cushing's syndrome, pheochromocytoma, excess ingestion of pentose or fructose.
Ketone None (normal), varying amount	-ketone bodies indicate incomplete fat metabolism as in diabetic ketoacidosis, dehydration, starvation; after aspirin ingestion.

Steps	Notes
To test urine with a reagent strip	
Open the bottle containing the reagent strip; remove a single strip; recover the bottle TIGHTLY.	Use the reagent strip ordered, such as Tes-tape, Clinistix, Uristix, Ketostix, Labstix, Chemstrip, etc..
Dip the reagent strip into the urine far enough to cover the chemically treated areas; remove it immediately.	Do not let the strip soak in the urine.
Tap the strip on the side of the urine container.	To remove excess urine.
Hold the strip in a horizontal position.	To prevent mixing of chemicals on the reagent strip.
Wait the length of time required.	Read directions for specific reagent strip. Be accurate.
Match the colors on the reagent strip carefully to the color comparison chart.	Be sure you are in good natural light.
Jot down the results.	So you can be sure of your findings.
Discard the reagent strip.	In plastic lined waste container.
To test urine with a reagent tablet	Such as Clinitest and Acetest.
Put clean water in two paper cups.	Use water from one cup to rinse the dropper.
Create a clean work area with the paper towel.	
Do not handle the reagent tablets or expose them to moisture.	Store reagent tablets carefully as they are poisonous. Keep the bottle of tablets **CLOSED TIGHTLY** when not in use.
Select the correct reagent tablet.	As ordered by the physician.
Perform the required test according to the manufacturer's directions on the test kit.	Follow the instructions and timing exactly.
Compare the result to the color chart.	Be sure you are in good natural light.

Steps	Notes
Discard the used reagent solution / tablet, water and paper cups. Clean and store the testing kit items.	Refer to Appendix C. Handling Body Fluids.
Discard the unused urine in the toilet; discard the collection container and disposable supplies; clean the work area.	Refer to Appendix C. Handling Body Fluids.
Remove and discard your gloves. Wash your hands.	Refer to Appendix C. Handling Body Fluids, and Appendix B. Handwashing.
Document the urine testing on the student's health record or treatment log.	Record date and time of testing; time and method of urine collection; description of the urine; reaction to reagent strips or tablets; action taken as a result of the testing; any problems.
Notify parents and physician of your concerns.	
Summarize the student's compliance with and apparent benefit (or lack of benefit) from having his urine tested at school.	Give this information to his parents and physician on a periodic basis or as indicated in his health care action plan.
end	end

HEMATOCRIT [Hct]

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Obtaining a blood specimen for hematocrit will not be delegated by the school registered nurse.

REMARKS:
Availability of appropriate equipment and supplies.

Appendix A

PROCEDURE

Definition:	A blood test to measure the percentage by volume of packed red blood cells in a whole blood specimen.
Purpose:	To aid diagnosis of anemia, polycythemia, and hydration.
Equipment:	Heparinized capillary tubes, capillary blood, clay tube sealer, centrifuge, hematocrit reading chart, disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents if the hematocrit could be performed at the physician's office rather than at school.	Review the physician's orders and the student's health care action plan.
Tell the student what you will be doing and how he can assist you.	Use developmentally appropriate language and demonstration.
Arrange for privacy.	
Gather the needed equipment.	Make sure there is an operational grounded electrical outlet to plug in the centrifuge.

Steps	Notes
Wash your hands. Put on disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Obtain a capillary blood specimen.	See Chapter 20. Specimen Collection, Blood.
After wiping away the first drop of blood, touch one end of a capillary tube to the blood and allow it to flow into the tube to the calibration mark.	If the tube is uncalibrated, fill it 3/4 full; if the tube has a red end, touch that end to the blood.
You can tip the tube downward to speed filling and place it level to retard filling.	Avoid getting air mixed with your blood sample.
Fill a second tube in the same manner.	
Place the tubes on a clean flat surface while you stop the flow of blood from the puncture site and make the student comfortable.	See Chapter 20. Specimen Collection, Blood.
When ready have the student resume his scheduled classroom activities.	
Place your finger over the wet (red) end of the tube while you insert the dry end into the clay sealer.	Your finger keeps the blood from flowing by gravity to the dry end.
Create a clay plug for each tube.	Be careful not to break the tubes. The size of the plugs may vary with the centrifuge. Check the manufacturer's directions. Some may recommend plugging both ends of the capillary tubes.
Unlock and open the centrifuge.	Follow the directions from the manufacturer for that machine.
Place the hematocrit tubes in the numbered slots in the centrifuge, clay plugs to the outside, pressed against the gasket.	Balance your load; the centrifuge can hold several tubes, so make a note of which slots have which student's blood.
Replace and lock the head cover.	According to the manufacturer's directions.

Steps	Notes
Close and lock the centrifuge. Set the timer as required. Start the motor.	Follow the manufacturer's directions.
Remove and read the capillary tubes one at a time.	Read both tubes for each student before reading a second set.
Place the spun tube on the hematocrit reading card on a flat well-lighted surface. Align the top of the clay plug with the 0% line. Keep the tube at right angles to the 0% line and move it along the scale until the top of the clear fluid level is at 100% line.	The hematocrit reading card may be in the centrifuge or as a separate card. Follow the manufacturer's directions. Position yourself so you are looking directly down on the tube and the card.
Determine the hematocrit by reading the % line at the top of the packed red cells. Repeat with the second tube.	Readings between the two tubes should not vary by more than 2%.
Discard the hematocrit tubes, and supplies used to obtain the blood specimen. Clean and store the centrifuge; store the supplies; clean the work area. Remove and discard you gloves.	Refer to Appendix C. Handling Body Fluids.
Wash your hands.	Refer to Appendix B. Handwashing.
Document obtaining an hematocrit on the student's health record or treatment log.	Record date and time; method used to obtain blood; hematocrit value; student's reaction to the procedure; any actions you took; any problems.
end	end

Maintenance of the centrifuge

Clean all surfaces with mild soap and water regularly to remove dirt and blood; disinfect as needed.	Read the manufacturer's maintenance manual. Refer to Appendix C. Handling Body Fluids. Wear gloves.
Inspect the centrifuge quarterly. Check the timer against a stop watch (it should be accurate to 30 seconds at ten minutes).	Or as recommended. Replace worn and damaged parts.

Steps	Notes
Check calibration using maximum packing time technique: Fill 12 capillary tubes with the same blood.	Load the first 6 tubes. Spin pair 1 for 1 minute; pair 2 for 2 minutes; pair 3 for 3 minutes. Load last 6 tubes. Spin pair 4 for 4 minutes; pair 5 for 5 minutes; pair 6 for 6 minutes.
Record the hematocrit values for each pair.	
Select the centrifuging time where the hematocrit results level off. Select the longer time where values are the same. Document your result.	Levels should agree within 2%. Use this time to centrifuge future blood samples.
end	end

BLOOD GLUCOSE (GLUCOMETER)

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School registered nurse or to be determined with the student's physician.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Obtaining a blood specimen for blood glucose (glucometer) will not usually be delegated by the school registered nurse when there are questionable results.

REMARKS:
If student is taught to self-test, monitoring will be done by designated school personnel.
Appropriate supplies must be available.

Appendix A

PROCEDURE

Definition: **A glucometer** is a device used to measure the glucose level of the student's blood.

Purpose: To evaluate diabetes control; to adjust insulin dosage and nutritional intake.

Equipment: A drop of capillary blood (see Chapter 20), a reagent strip, a reflectance meter (glucometer), disposable gloves, plastic lined waste container.

Steps	Notes
Determine with the parents when blood glucose testing should be done at school.	Review the physician's orders and the student's health care action plan.
Determine the time for the procedure.	Blood glucose is usually measured before meals and at bedtime, and during episodes of hypoglycemic symptoms or other problems.
Tell the student what you will be doing and how he can assist.	Encourage the student to assume as much independence and responsibility for this task as possible.

Steps	Notes
Arrange for privacy.	
Wash your hands. Use disposable gloves.	Refer to Appendix B. Handwashing, and Appendix C. Handling Body Fluids.
Obtain a blood specimen by finger stick; an automated lancet may be used.	See Chapter 20. Specimen Collection, Blood.
Procedure for use of reagent strip and glucometer vary with the manufacturer.	Follow the specific instruction of the equipment being used.
Help the student interpret the results of the test.	Follow student's health care action plan to determine the insulin dosage and further action such as urine testing.
When necessary, obtain a urine specimen.	If the blood glucose is greater than 240 mg./100 ml., or he is ill. See Chapter 20. Specimen Collection, Urine.
Test urine for ketone.	Follow student's health care action plan to care for this student.
Notify parents and/or physician of your findings and your concerns.	
Document testing for blood glucose on the student's health record or treatment log.	Record date and time, method used to obtain the blood, instrument used to monitor the blood glucose, student's competence in performing the procedure, the result obtained, any actions based on the result, any problems.
==end==	==end==

REFERENCES for Chapter 21. SPECIMEN TESTING:

Balik, Barbara. "The Student with Diabetes." Managing The Student With A Chronic Health Condition: A Practical Guide For School Personnel. Minneapolis: PATHFINDER and the School Nurse Organization of Minnesota, 1986.

Brunner, L. S. and Suddarth, D. S. The Lippincott Manual of Nursing Practice, 4th edition. Philadelphia: J. B. Lippincott Company, 1986.

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CARE OF EQUIPMENT

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
All school personnel using the equipment.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Care of equipment will not usually be delegated by the school registered nurse when there is evidence of malfunctioning.

REMARKS:
Follow recommendation of manufacturer, current nursing procedures and home care provider.

Appendix A

PROCEDURES

Definition: Care of implies looking after or dealing with something or someone. Equipment is something material with which a person, organization or entity is equipped; the instruments, apparatus, or things required for a particular job or purpose.

Purpose: To ensure the equipment will function when needed by the student for routine care or in an emergency; to minimize risk of infection from equipment shared by several students; to reduce risk of infection from repeated use of equipment by same student.

Steps	Notes
Obtain the manufacturer's instructions from the supplier or parent.	Make two copies: keep one in your building file; keep the other in a resealable plastic bag with the piece of equipment.
Become very familiar with the equipment.	To learn about unfamiliar equipment and procedures, arrange for a knowledgeable representative to provide a demonstration. This person might be the therapist, family member, student, home care provider, hospital staff person, manufacturer representative, pharmaceutical sales person, and/or the physician.

Steps	Notes
Make sure all supplies are on hand.	Arrange for the family to provide any specialized cleaning supplies, any special tools (odd sized screwdrivers, wrenches, etc.) and spare parts (tubing, nuts, bolts, screws, spare glass suction bottles, etc.).
Keep parts and equipment in a labeled Ziploc-type plastic bag with the equipment.	If it must be stored separately, attach a note to the equipment telling where it is stored.
Maintain a list of current local suppliers of oxygen, IV equipment, odd-sized hardware, etc.	Keep this list as well as the notation about individual student's supplier because you may need a second source to call in an emergency.
Work with the classroom teacher to establish a clean area for students' extra clothing and supplies.	This is separate from personal care items and soiled items that will be sent home with the students.
Recommend that each person working with the student, wash the equipment with soap and water, rinse, disinfect, rinse and dry after each use.	Refer to Appendix C. Handling Body Fluids.
Work with the building administrator and custodian to have the bathrooms and large surfaces cleaned and disinfected daily and as needed.	Refer to Appendix C. Handling Body Fluids.
Determine who will prepare the disinfectant solution(s), how often, and where the solution(s) will be kept.	Decide this on a building level. It is usually the custodian.
Work with the custodian to obtain a supply of plastic bags and disposable gloves.	For each classroom and work area.
Obtain at least one covered puncture resistent container to be used to discard sharp items contaminated with body fluids.	Have at least one for each school building.

Steps	Notes
Provide instruction for proper care of used needles and other supplies contaminated with body fluids.	As needed in each school building. Refer to Appendix C. Handling Body Fluids. Follow school district/local community policy to arrange for proper disposal of the container when it is full.
end	end

Guidelines for care of specific equipment can be found as follows:

Bedpan	Chapter 10	page 137
Centrifuge	Chapter 21	page 231
Nebulizer	Chapter 6	page 89
Scale	Chapter 3	page 23
Suction equipment	Chapter 7	page 102
Thermometer	Chapter 2	page 12
Tracheostomy	Chapter 7	page 93
Urinary catheter (clean)	Chapter 9	page 127
Urinal	Chapter 10	page 139

REFERENCES for Chapter 22. CARE OF EQUIPMENT

Brainerd, Elaine, James Hadler and Patricia Checko. "Guidelines for Handling Body Fluids in Schools." Managing The Student With A Chronic Health Condition: A Practical Guide For School Personnel. Minneapolis: PATHFINDER and the School Nurse Organization of Minnesota, 1986.

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Florida Department of Health and Rehabilitative Services. School Health Nursing Services For Medically Complex Children, HRS Pamphlet 150-7. Tallahassee: Florida Department of Health, 1987.

CHARTING

from Technical Skills Chart

SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT:
School personnel providing care.

TRAINING NEEDS:
To be identified by the school registered nurse.

CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION:
Charting on the individual cumulative health record is to be done by the school Registered Nurse or designee.

REMARKS:
Recording forms may be set up by school registered nurse for school personnel to check off when care is given.
School registered nurse always keeps progress notes of care given.

Appendix A

PROCEDURE

Definition: Charting is written documentation of the assessment and evaluation of the student's health needs followed by a record of interventions (medications, treatments) provided by/for the student and the result of these interventions.

Purpose: To provide evidence of health care planned and provided by/for the student in the school setting; to provide a basis for evaluating the student's health care; to facilitate consistency and compliance among care-givers.

Equipment: Student's cumulative health record, other forms, pen.

Steps	Notes
Data Collection: History Physical Observation Previous school health records Report of previous health evaluations Health records from student's health care providers.	Use forms and routine approved by your school district; organize your information by using a "SOAP" format (Subjective, Objective, Assessment, Planning). Some sample forms from Colorado School Health Guidelines are included at the end of this chapter.

Steps	Notes
Define the student's present level of functioning and his health needs. Develop the problem list.	Consider his strengths as well as his weaknesses; his medical/health condition; the impact on his ability to perform and learn in the school setting.
Develop a health care action plan incorporating the student's health needs that are to be addressed at school.	Guidelines and sample form for developing a health care action plan are included at the end of this chapter.
Develop appropriate flow sheets and treatment logs.	Flow sheets are designed to assist you to plan the student's routine care. Treatment logs facilitate documentation of care provided for the student.
Implement the health care action plan. Document every health intervention. Use language that is clear, concise and accurate. Write legibly. Do not use abbreviations unless they are defined in the record.	The individual providing the care must perform the documentation, unless the student provided his own care. Record: who received care; who provided care; what was done; what was observed; when it was done; where it was done; How it was done and how the student reacted; why it was done; what follow-up contacts were made with the health care provider and parents. Your charting should show that you knew the student's problems, that you implemented his care plan, that you were alert for possible complications.
Summarize treatment log information on the student's cumulative health record.	Use "SOAP" format; the frequency of the measurements/interventions recorded on the treatment log will determine how often you need to summarize on the health record.
Sign your full legal name and professional title each time you record on the student's health record or treatment log [Mae B. Short, R.N.].	You may be able to use your initials on the treatment log if there is a record of your full name and signature with corresponding initials on that page of the treatment log.

Steps	Notes
Define the student's present level of functioning and his health needs. Develop the problem list.	Consider his strengths as well as his weaknesses; his medical/health condition; the impact on his ability to perform and learn in the school setting.
Develop a health care action plan incorporating the student's health needs that are to be addressed at school.	Guidelines and sample form for developing a health care action plan are included at the end of this chapter.
Develop appropriate flow sheets and treatment logs.	Flow sheets are designed to assist you to plan the student's routine care. Treatment logs facilitate documentation of care provided for the student.
Implement the health care action plan. Document every health intervention. Use language that is clear, concise and accurate. Write legibly. Do not use abbreviations unless they are defined in the record.	The individual providing the care must perform the documentation, unless the student provided his own care. Record: who received care; who provided care; what was done; what was observed; when it was done; where it was done; how it was done and how the student reacted; why it was done; what follow-up contacts were made with the health care provider and parents. Your charting should show that you knew the student's problems, that you implemented his care plan, that you were alert for possible complications.
Summarize treatment log information on the student's cumulative health record.	Use "SOAP" format; the frequency of the measurements/interventions recorded on the treatment log will determine how often you need to summarize on the health record.
Sign your full legal name and professional title each time you record on the student's health record or treatment log [Mae B. Short, R.N.].	You may be able to use your initials on the treatment log if there is a record of your full name and signature with corresponding initials on that page of the treatment log.

Steps	Notes
Evaluate the effectiveness of the health care action plan.	Identify changes in the student's condition or level of functioning; identify; identify gaps in the delivery system.
end	end

REFERENCES for Chapter 23. CHARTING:

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Nursing Skillbook, Nursing78 Books. Documenting Patient Care Responsibly. Horsham, PA: Intermed Communications, Inc., 1978.

Silver, Henry K., C. Henry Kempe and Henry B. Bruyn. Handbook of Pediatrics, tenth edition. Los Altos: Lange Medical Publications, 1985.

GUIDELINES FOR HEALTH CARE ACTION PLAN FOR STUDENTS WITH SPECIAL NEEDS

The Health Care Action Plan is developed jointly by the parent, nurse, physician and school building administrator and encourages full communication and cooperation to provide the best possible care. **The Health Care Action Plan is treated as confidential and is stored in an area which is easily accessible to personnel who are identified in the plan.** If the student is in special education a copy of this plan is to be filed with the IEP.

I. PARENT

A. Provides medication, supplies, equipment and physician's written instruction to the school.
B. Is encouraged to participate in the training of school personnel in administration of the medication or treatment.
C. Participates in developing the Action Plan.

II. SCHOOL NURSE

A. At the beginning of each school year the nurse or her designee will survey emergency or health information and develop a list of students who need to have an action plan.

B. Obtains significant health data.
   1. Onset - age of student.
      a. Description of the significant health condition.
      b. Treatment.
   2. Subsequent episodes and treatment and other significant history including allergies.
   3. Date last seen by physician for above noted concerns.
   4. Name and phone number of current Colorado physician who see this student.
   5. Release of Confidential Information form to physician.
   6. Request to administer medication form signed, if needed.
   7. Name of preferred hospital where student is to be transported.
   8. Current height and weight. This is needed by emergency transportation teams.
   9. See Handbook of Pediatrics, Silver, Kempe and Bruyn for further history taking guidelines.

C. Develops and implements the Health Care Action Plan to be carried out in the school This should include situations such as while the student is on the bus or on field trips.

1. The plan must include the following components:
    a. Student identification data and date of plan.
    b. Description of the health condition and the possible effects on this student. If multiple health conditions exist, list each as a problem in the action plan.
    c. General guidelines for determining action.
    d. Immediate actions required.
    e. Procedure.
        (1) medication and equipment needs and storage.
        (2) possible adverse effects of procedure or medication.
        (3) signed orders if applicable.
        (4) names and phone numbers of persons to be called.
2. Identifies administrator and three other people in the school to be trained to assist with the procedure.
3. Ensures that the plan is typed and signed by parent, nurse and administrator. Obtains physician's signature if prescribed health care is to be provided by the school.
4. Makes every effort to see that medication and/or treatment procedures are followed.

D. Advises school personnel of Health Care Action Plan.
    1. Assists parent in the instruction of identified people in the school in the procedure. List names and dates of instruction on health record.
    2. Inserts Action Plan into file system and makes notation on emergency card that an action plan is on file.
    3. Updates the Health Problems List to include this student.

III. **PHYSICIAN** - Must be licensed in this state.

A. Serves as a team member in writing a Health Care Action Plan which is functional in the school setting.
B. Identifies health information and services which need to be provided in the school setting.
C. Determines if special training is needed to provide the prescribed health care.
D. Writes prescription for parent to obtain medication an/or equipment.

Medication	Equipment
1. Dosage	1. Purpose
2. Route	2. Direction is use or application
3. Site of injection	3. Precautions
4. Side effects	4. Other
5. Other	

IV. ADMINISTRATOR AND/OR DESIGNEE

A. Informs Director of Transportation of the student and the potential need for health care. Provides a copy of Health Care Action Plan.

B. Manages potential environmental concerns such as:
   1. Informing all personnel including lunchroom and playground aides of potential environmental situations such as allergic reactions.
   2. Special equipment needs such as wheel chair ramp.
   3. Extermination of insects.
   4. Emergency power supply.
   5. Appropriate outlets for health care equipment, etc.

C. Knows the potential of the following rescue teams and inquires into their capabilities such as:
   1. Contacts local emergency unit.
      a. What is their training?
      b. Is there always a person who is trained to give parenteral medications?
      c. What medications are carried on the unit?
      d. Does a rescue unit always come? Do they send the police first?
      e. How long does it take a rescue unit to get there? If more than 5 minutes consider flight rescue.
      f. Cost of transportation.
   2. Flight rescue
      a. Available landing space.
      b. Flight time from hospital.
      c. Cost of transportation.

D. Communicates with parents:
   1. The developed plan and potential concerns.
   2. What the expected costs will be and who will be responsible.
   3. Ensures that the emergency card is fully completed.

E. Provides time and financial support for training of school registered nurse(s) and other staff as deemed appropriate.

HEALTH CARE ACTION PLAN

STUDENT NAME ____________________ BIRTHDATE __________
SCHOOL ______________ GRADE ______ TRACK ______ HT. ______ WT. ______

Description of illness or condition:

Personnel who are trained or to be trained. Include dated of training. ______

Time schedule and/or indication for action. ______

Action required and degree of urgency. ______

Procedure - Attach additional sheets as needed. ______

Emergency information

Parents, legal guardians or other designated responsible adult, and Doctor.

	Telephone		Address
	Home	Work	
1.			
2.			
3.			
4.			

Transportation Plan. ______

Plan to be discontinued or re-evaluated on this date: ______

Principal's Signature Date Parent's Signature Date

School Registered Nurse Date Doctor's Signature (if appropriate) Date

Any cost incurred is at the expense of the family.

copies: School
Parent
Physician

HEALTH CARE ACTION PLAN
PHYSICIAN INFORMATION

Dear Physician:

Your patient ______________________________, D.O.B. __________, is attending ______________________________. The parents are requesting that specific health care procedures be provided while the student is at school. We are requesting your assistance in identifying the health information and services which need to be provided in the school setting. Any cost incurred for your participation is at the expense of the family. Members of the school team include the parent, school administrator, school nurse and other school personnel with direct responsibility for the educational care of the student. We look forward to working with you to provide an optimal educational experience in a safe environment for your patient.

Diagnosis(es): ______________________________

Physical condition for which the procedure is to be performed: ______________________________

Medical orders for procedures and medication which are to be done at school: ______________________________

Precautions, possible untoward reactions, and interventions: ______________________________

Time schedule and/or indication for the procedure: ______________________________

The procedure is to be continued as above until (date): ______________________________

Other ______________________________

Physician's Signature ______________________________ Date ________ 19 ____
Address ______________________________ Phone ______________

copies: School

SCHOOL HEALTH PROBLEM LIST

STUDENT'S NAME:		DOB:
DATE	PROBLEM	INACTIVE/RESOLVED PROBLEM
	1. __________ PLAN:	
	2. __________ PLAN:	
	3. __________ PLAN:	
	4. __________ PLAN:	
	5. __________ PLAN:	
	6. __________ PLAN:	
	7. __________ PLAN:	
	8. __________ PLAN:	

* List the different health problems, e.g., cerebral palsy, vision loss, diabetes, hearing loss, temporary health problems due to accident, injury or surgery.

SCHOOL HEALTH FLOW SHEET FOR PLANNING TREATMENTS IN THE SCHOOL SETTING*

Student's Name: ______________________________ Birthdate: __________
Physician: ______________________________ Phone: __________

	TREATMENT to be GIVEN	QUANTITY / DURATION	PROVIDER
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			
Day: Time:			

* To plan the schedule of the student's health care, list the different types of treatment with frequency, e.g.: medication, feeding, postural drainage, catheterization, suctioning.

DAILY LOG OF TREATMENT GIVEN BY SCHOOL PERSONNEL

Student's Name: ______________________ Birthdate: ________
PROCEDURE: ______________________ From ________ 19 ____ To ________ 19 ____
Physician: ______________________ Phone: ________

Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.
Date: Time:	Comments: Init.

Signature	Init.	Title	Date

Continuation of comments can be entered on back of this sheet.

DAILY LOG OF TREATMENT GIVEN BY SCHOOL PERSONNEL

Continuation of Comments

Date & Time	Comments continued:
	Init.

Date & Time	Comments continued:
	Init.

Date & Time	Comments continued:
	Init.

Date & Time	Comments continued:
	Init.

SCHOOL HEALTH PROGRESS NOTES

Student's Name:			DOB:
Date	Prob.#	Notes	Signature & Title

Codes: TNC = Teacher Nurse Conference; HV = Home Visit; TV = Telephone Visit; RI = Routine Interview; BTC = Back To Class

HEALTH HISTORY AND PHYSICAL ASSESSMENT INFORMATION

NAME OF STUDENT ______________________ DATE OF BIRTH ____________

PRESENT SCHOOL ______________________ GRADE ____________

ADDRESS ______________________ PHONE ____________

CURRENT PROBLEM ______________________________________

____

PERSON(S) FILLING OUT FORM ______________________ DATE ____________

MOTHER ONLY ☐ FATHER ONLY ☐ BOTH ☐

OTHER ☐ (please specify) ______________________________

FATHER'S NAME ______________________ MOTHER'S NAME ______________________

OCCUPATION ______________________ OCCUPATION ______________________

PARENT RELATIONSHIP TO CHILD: NATURAL ☐ ADOPTED ☐

LIVING WITH: BOTH PARENTS ☐ FATHER ONLY ☐ MOTHER ONLY ☐

WHO ELSE LIVES WITH CHILD ______________________________

MAJOR LANGUAGE IN HOME ______________________________

FAMILY PHYSICIAN ______________________ DATE OF LAST PHYSICAL ____________

HEALTH HISTORY:

1. PREGNANCY AND BIRTH

A. PRENATAL

(1) When this child was born, how old was mother ________ father ________.
(2) Was this child born (1st, 2nd, 3rd, etc.) __________ of your children.
(3) How long was this pregnancy? ____________ Was baby born on time? ______
(4) What kind of problems (bleeding, cramping, etc.) or accidents happened during this pregnancy - if any? ______________________

____

(5) Did you take any medications while pregnant? __________
What and why? ______________________________________
(6) What kinds of problems did you have with any other pregnancies? ______

____

____

B. PERINATAL

(1) How long was your labor? ______________________________
Were there any difficulties during the delivery? ________ What kinds?

____

____

(2) Did you have a Caesarean section, or regular vaginal, or forceps delivery? ____________

(3) How long did mother stay in hospital after birth? ____________
Did the baby come home with mother? ________ If not, please explain
____

(4) Did baby need oxygen after birth? ________

(5) Did baby turn yellow enough to be treated? ________

2. DEVELOPMENTAL HISTORY

A. DEVELOPMENTAL LANDMARKS

At what age did your child:

Begin to crawl ________
Begin to walk alone ________
Begin saying words (not mama or dada) ________
Finish toilet training (bowel) ________
Finish toilet training (bladder) ________

B. Did you or anyone else have serious concerns that your child was not growing well? Please explain ____________
____

C. Has anyone else in your family had any growing problems? Please explain
____

3. CURRENT HEALTH HABITS AND OTHER BEHAVIOR

A. Does your child feed himself well? ________
Does he have any problems eating certain foods? ________
Good appetite or poor one? ________ Is he often hungry? ________
Do you feel your child gets enough to eat? ________

B. How much sleep does he get at night? ________ Naps? ________

C. Does he dress himself well? ________ Does he pick out his own clothes? ____
What does he need help with? ____________

D. Does he ever wet the bed anymore? ________ How often? ________
When did he last wet the bed? ____________

E. Does he have any habits such as thumbsucking or nail biting? ________
____

F. How much exercise does your child get? ____________

G. Is there anything he is now particularly afraid of? ________ What is it? ____________

H. How much time do you think your child spends daydreaming? ________

I. To your knowledge, what kinds of experience has your child had with:
alcohol ____________
drugs ____________

4. PERSONALITY TRAITS

A. Please indicate whether you think your child is generally:

☐ happy	or	☐ sad	other ____________
☐ shy	or	☐ out-going	other ____________
☐ generous	or	☐ jealous	other ____________
☐ restless	or	☐ calm	other ____________
☐ good-natured	or	☐ irritable	other ____________
☐ kind to others	or	☐ unkind	other ____________

B. Does your child cry easily? ________ What makes him cry? ____________
____

C. What kind of temper does your child have? ____________
What makes him lose his temper? ____________
What does he do when angry? ____________

D. Does your child make friends easily? ________
Are his friends mostly his age, younger, or older? ____________

E. What does your child like to do for fun? ____________
____________ Does he prefer to play indoors or outdoors? ____________

5. SIGNIFICANT HEALTH PROBLEMS, ILLNESS, AND COMPLAINTS

A. HEALTH PROBLEMS

(1) Is your child now under regular medical care for any condition? ______
What is the condition? ____________
____

(2) Is he currently taking any medications? ____________
What are they? ____________
Does he have any side effects from them? ________ If so, what? ____
____

(3) Does your child have any chronic problems such as:
asthma ______ allergies ______ seizures (fits) ______
diabetes ______ other ______

(4) Is your child frequently ill with such things as:
colds ______ how often? ____________
ear infections ______ how often? ____________
other ______ how often? ____________
____

(5) What physical or mental handicaps does your child have? ________
____

B. PAST PROBLEMS

(1) What operations (surgery) has your child ever had, and when? ________
____
____

(2) What injuries has he had that were serious enough for a doctor's care (stitches, casts, etc.) and when? ____________
____
____

(3) Has your child ever lost consciousness (knocked out), either from an injury or fainting? ________ Please explain ______________________________

____

____

C. FAMILY HEALTH HISTORY

(1) Please list the names and ages of blood-relatives (immediate family) and what health problems each may have:

Name	Age	Relationship	Health Problems

(2) Has anyone else in the family (including parents) had any learning or other school problems? ________ Please explain ______________________________

____

____

____

____

D. CURRENT HEALTH CHECKLIST

Please circle any of the following items that apply now to your child's health, and explain details at the bottom:

(1) EENT: Double vision, tearing, blurring, eye discharge, crossed eyes, colds, sore throats, earaches, stuffy nose, hearing, smelling, taste, mouth breathing, snoring, sneezing, nosebleeds, dental problems.

(2) CARDIO RESPIRATORY: Shortness of breath, wheezing, coughing, chest pain, swelling, turning blue with exercise, cold hands or feet.

(3) GASTRO INTESTINAL: Vomiting, diarrhea, constipation, abdominal pain, jaundice (yellow skin or eyes), bowel control, rectal bleeding, nausea, pinworm symptoms (itchy rectum).

(4) GENITOURINAL: Urinates too frequently, pain, blood in urine, vaginal discharge, abnormal menstrual history, abnormalities of penis and testes, bladder control.

(5) NEURO-MUSCULAR: Tingling, numbness, headaches, dizziness, seizures (fits), shaking, twitching, blackouts, problems with posture, deformities, gait, personality changes, unconsciousness, general speech.

(6) SKIN: Itching, irritation, perspiration, growths, rash, excessive dryness, unusual skin color, nail or hair problems.

6. SUMMARY OF HEALTH HISTORY:

PHYSICAL ASSESSMENT

Date ____________________ Birth Date ____________ Teacher/Grade ____________

Name ________________________

Height __________, Percentile __________; Weight __________, Percentile __________

KEY TO INTERPRETATION:

0 - Essentially normal
1 - Slight pathology
2 - Moderate pathology
3 - Severe pathology

GENERAL APPEARANCE:

HEAD

1. HAIR

____________ Dry
____________ Brittle
____________ Course

SCALP

____________ Nits
____________ Flaky
____________ Dry
____________ Oily
____________ Dandruff
____________ Other

2. EYES

____________ Vision Acuity
____________ Strabismus
____________ Exudate
____________ Redness
____________ Movement
____________ Pupillary Reaction

3. EARS

EXTERNAL

____________ Hearing Acuity
____________ Redness
____________ Swelling
____________ Tenderness
____________ Drainage

INTERNAL

____________ Wax - Amount
____________ Color
____________ C/O Pain

4. MOUTH & THROAT

____________ Sores
____________ Redness
____________ Lymph Nodes
____________ Teeth
____________ Speech

5. SKIN

COLOR

____________ Cyanosis
____________ Ruddiness
____________ Pallor
____________ Jaundice

TEXTURE

____________ Rough
____________ Dry
____________ Oily
____________ Smooth

LESIONS

____________ Rash
____________ Acne
____________ Cuts or Bruises
____________ Scars

6. CHEST, LUNGS & HEART

____________ TPR
____________ BP
____________ HR & Rhythm
____________ Pulses
____________ Breath Sounds

7. MUSCLE - SKELETAL

____________ Spine
____________ ROM
____________ Posture

8. NEUROLOGICAL

GROSS MOTOR SKILLS

____________ Balance on 1 foot
____________ Hops
____________ Skips
____________ Jumps
____________ Tandum walk
____________ Catches Ball

FINE MOTOR SKILLS

____________ Finger to Nose
____________ Eyes open
____________ Eyes Closed
____________ Finger to Finger
____________ Finger to Thumb
____________ Heel to Shin

SUMMARY: List areas of concerns and strengths.

NURSING COMMENTS: State present level of physical functioning in educator terms.

RECOMMENDATIONS: List health needs in educator terms.

____
Date

____
School Nurse

APPENDIX

TECHNICAL SKILLS TO MEET THE HEALTH CARE NEEDS AND SERVICES FOR STUDENTS IN THE SCHOOL SETTING

All students requiring technical skills and services to meet their health care needs are to be seen by the school registered nurse for assessment, planning, evaluation and monitoring of the health care needs. These students shall have a health care action plan written and implemented. The school registered nurse is to be employed by the school district or contracted from an agency where school nurse supervision is provided.

- When a physician's written authorization is required for specialized health care, the physician may serve as a team member to develop a health care action plan.
- There are certain procedures that cannot be done by a non-nurse/medical person.
- Students and parents should inform school personnel of techniques and procedures being used at home.
- When the student requires equipment, supplies and/or medication which are specific and/or individualized they are to be provided by the parent.
- The procedure should not be performed at school unless clearly necessary and when it cannot reasonably be accomplished outside of school hours.

HEALTH CARE NEEDS OF CHILDREN AND YOUTH IN SCHOOL	SCHOOL PERSONNEL WHO CAN APPROPRIATELY PROVIDE CARE OR ASSIST THE STUDENT	TRAINING NEEDS AS IDENTIFIED BY SCHOOL RN	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION. DUTIES WILL NOT USUALLY BE DELEGATED BY THE SCHOOL RN UNDER THESE CIRCUMSTANCES	REMARKS
1. Dressing - Assist (clothing)	School Registered Nurse Physical Therapist Occupational Therapist Teacher Health Clerk Secretary *Specialized Aide	Yes		Student and parent can inform school personnel of procedure being used at home.

* Refer to "Criteria and Competencies" II, C.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
2. Vital Signs				
TPR (Temperature, Pulse and Respirations)	To be determined by the School Registered Nurse	Yes	Evidence of fluctuating or abnormal TPR	
Blood Pressure [BP]	To be determined by the School Registered Nurse	Yes	Evidence of fluctuating or abnormal BP. When BP is to be taken before or after medication or treatment.	Availability of appropriate equipment.
3. Height / Weight	School Registered Nurse Occupational Therapist Physical Therapist Teacher Health Clerk Secretary Specialized Aide	Yes	Evidence of frequent fluctuations or dramatic changes in weight. Arrested growth.	Availability of appropriate equipment. Record on growth curves chart. Medications might affect fluctuation.
4. Fluids - Nourishment				
Prepare Nourishment as specified in action plan.	School Registered Nurse Occupational Therapist Physical Therapist Teacher Food Service Personnel Health Clerk Secretary Specialized Aide	Yes		Student and parent or guardian can inform school personnel of procedure being used at home. Parent / guardian shall provide specialized nourishment.
Feed Student (orally)	School Registered Nurse Occupational Therapist Physical Therapist Teacher Health Clerk Secretary Specialized Aide	Yes	Evidence of change in student's oral motor swallowing, positioning and/or sensory abilities.	Student and parent or guardian can inform school personnel of procedure being used at home.
Hyperalimentation / Lipids (high calorie intravenous [IV] feeding)	School Registered Nurse	Yes	Never delegated.	Requires prescription from physician.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
4. Fluids - Nourishment (cont.)				
Gastrostomy Feedings Tube already in place	**School Registered Nurse or to be determined with the student's physician.**	**Yes**	**Evidence of obstruction or malabsorption, infection at insertion site, or displacement of tube.**	Requires prescription from physician. School RN will follow health care action plan for reinsertion of tube.
Nasogastric Tube Feedings Tube already in place	**School Registered Nurse** or to be determined with the student's physician.	**Yes**	**Evidence of displacement of tube, obstruction of tube, excessive vomiting** or diarrhea.	Requires prescription from physician. School RN will follow health care action plan for reinsertion of tube.
5. **Medications**				
Assist Student (to take own medication)	School Registered Nurse or to be determined with the student's physician.	Yes	**Medications requiring blood pressure, radial or apical pulse before or after giving. Medications that require nursing judgement to determine dose.**	All medications given in school should follow the requirement in Standards and Regulations for Schools adopted by the Colorado Board of Health.
Give Oral Medication	School Registered Nurse or to be determined with the student's physician.	Yes	**Medications requiring blood pressure, radial or apical pulse before or after giving. Medications that require nursing judgement to determine dose.**	All medications given in school should follow the requirement in Standards and Regulations for Schools adopted by the Colorado Board of Health.
Give **Medications** via **Gastrostomy** or **Nasogastric Tube**	**School Registered Nurse or to be determined with the student's physician.**	Yes	**Medications requiring blood pressure, radial or apical pulse before or after giving. Medications that require nursing judgement to determine dose.**	Requires prescription from physician. Note: It is advised by the Colorado Board of Nursing that this is not to be delegated.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
5. Medications (cont.) Give Medications via Gastrostomy or Nasogastric Tube (cont.)			Evidence of displacement of tube, obstruction of tube, excessive vomiting or diarrhea.	School RN will follow health care action plan for reinsertion of tube.
Give Intravenous [IV] Medications (with IV tube already in place)	School Registered Nurse	Yes	Not to be delegated	Requires prescription from physician. Given only by RN. If tube is obstructed, follow health care action plan.
Give Intramuscular [IM] Medications	School Registered Nurse	Yes	Might be given by other trained school personnel in an emergency, such as a severe allergic reaction (e.g., bee sting). Otherwise not to be delegated.	Given only by RN. Requires prescription from physician.
6. Oxygen and Respirator/ Ventilator				
Oxygen per Mask per Cannula	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of increasing respiratory distress.	Requires prescription from the physician. Student and parent or guardian can inform school personnel of procedures used at home. Consider fire hazard in relation to smoking by students and/or staff. Consider storage of the equipment in relation to fire, tampering, theft. Family provides equipment and supplies for the O_2 and for moving the O_2.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
6. Oxygen (cont.)				
Mechanical Nebulizer	**School Registered Nurse or to be determined with the student's physician.**	Yes	**Evidence of increasing respiratory distress, or obstruction. Need for medication.**	**Requires prescription from the physician. Student and parent or guardian can inform school personnel of procedures being used at home. Parent / guardian provides equipment and supplies. Availability of alternate power supply. If medications are used see #5.**
7. Suctioning				
Tracheostomy Care and Suctioning	School Registered Nurse or to be determined with the student's physician.	Yes	Respiratory distress during suctioning, evidence of bright red bleeding.	Requires prescription from the physician.
Oral suctioning	School Registered Nurse or to be determined with the student's physician.	Yes		
8. Respiratory Therapy				
Postural Drainage	School Registered Nurse Occupational Therapist Physical Therapist or to be determined with the student's physician.	Yes	Evidence of increasing respiratory distress.	Requires prescription from the physician.
Percussion	School Registered Nurse Physical Therapist or to be determined with the student's physician.	Yes	Evidence of increasing respiratory distress.	Requires prescription from the physician.
Spirometer (assisting deep breathing)	School Registered Nurse Physical Therapist or to be determined with the student's physician.	Yes	Evidence of increasing respiratory distress.	Requires prescription from the physician.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
9. Urinary Tract Care				
External Catheter	School Registered Nurse Teacher Health Clerk Secretary Specialized Aide	Yes		
Intermittent Clean Catheterization	School Registered Nurse or to be determined with the student's physician	Yes	Evidence of infection, pain, bright red bleeding, inability to insert catheter.	Requires prescription from the physician. Parent or guardian provides equipment and supplies for catheterization.
Crede Method	School Registered Nurse or to be determined with the student's physician.	Yes		Requires prescription from the physician. Student and parent or guardian inform school of procedures being used at home.
Indwelling Catheter (care of external equipment only)	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of infection, displacement or obstruction of tube.	Parent or guardian to provide catheterization equipment.
10. Bowel and Bladder				
Bedpan and Urinal	School Registered Nurse Teacher Health Clerk Secretary Specialized Aide	Yes	Evidence of infection and/or skin breakdown.	Availability of appropriate equipment.
Care of Incontinent Student	School Registered Nurse Teacher Health Clerk Secretary Specialized Aide	Yes	Evidence of skin breakdown and/or infection.	Parent or guardian to provide supplies of clean clothes.
Stoma Care	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of skin breakdown and/or infection	Specialized supplies for care must be provided.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
10. Bowel and Bladder (cont).				
Diapering	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of skin breakdown and/or infection.	Specialized supplies for care must be provided.
Prescribed Bowel and Bladder Training	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of infection and/or skin breakdown.	Parent or guardian to provide medications as prescribed by the physician.
11. Dressing - Apply				
Sterile	School Registered Nurse	Yes	Not to be delegated to non-nurse.	Written authorization from physician. Parent or guardian to provide supplies.
Clean	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of infection, bleeding or drainage. Complaints of pain or discomfort.	
Reinforcement	School Registered Nurse or to be determined with the student's physician.	Yes	Excessive bleeding or drainage. Complaints of pain or discomfort.	
12. Use of Warm and Cool Applications	School Registered Nurse Physical Therapist Occupational Therapist or to be determined with the student's physician.	Yes		Requires prescription from the physician. Availability of supplies and equipment. Special precautions for students who have diabetes or heart disease or unstable basal body temperatures.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
13. Personal Hygiene Oral Hygiene Nail Care Hair Care Skin Care	School Registered Nurse Physical Therapist Occupational Therapist Teacher Health Clerk Social Worker Counselor Secretary Specialized Aide	Yes	Evidence of rash, skin breakdown and/or infection.	May require physician's authorization to provide this care.
14. Decubitus (Pressure Sores)				
Prevention	School Registered Nurse Occupational Therapist Physical Therapist Health Clerk Teacher Specialized Aide	Yes		Prevention care to be taught by the school registered nurse, physical therapist, occupational therapist or physician.
Care	School Registered Nurse Occupational Therapist Physical Therapist or to be determined with the student's physician.	Yes	Evidence of granulation and not healing	Requires prescription from the physician.
15. Positioning	Physical Therapist School Registered Nurse Occupational Therapist Teacher Health Clerk Secretary Specialized Aide	Yes	Evidence of skin breakdown and/or pain on movement.	Availability of adequate equipment and space in school buildings. Positioning to be taught by physical therapist, school registered nurse, occupational therapist.
16. Exercises Range of Motion Carry Out Prescribed Exercise Program	Physical Therapist School Registered Nurse Occupational Therapist Adaptive P.E. Teacher or to be determined with the student's physician.	Yes	Evidence of pain or more restrictive movement.	Requires prescription from the physician.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
17. Ambulation Assist with Crutches Walker Cane Wheelchair Scooter Board	Physical Therapist School Registered Nurse Occupational Therapist Teacher Health Clerk Secretary Specialized Aide	Yes		Availability of appropriate equipment in school buildings. A prescription may be required from the physician.
18. Cast and/or Braces (Observation, alignment, functioning)	School Registered Nurse Physical Therapist Occupational Therapist Adaptive P.E. Teacher or to be determined with the student's physician.	Yes	Evidence of impaired circulation, infection, pain, drainage or bleeding.	May require a physician's prescription.
19. Intake / Output	School Registered Nurse Occupational Therapist Physical Therapist Teacher Health Clerk Secretary Specialized Aide	Yes	Changes is usual pattern.	Availability of appropriate equipment.
20. Specimen Collection Urine Stool Sputum Blood (finger stick)	School Registered Nurse or to be determined with the student's physician.	Yes	Evidence of infectious disease. Obtaining blood specimen.	Requires prescription from the physician. Health care provider or parent/guardian provides an appropriate collection container and supplies. WEAR GLOVES.
21. Specimen Testing				
Urinalysis [UA]	School Registered Nurse of to be determined with the student's physician.	Yes	Questionable results.	If student is taught to self-test, monitoring will be done by designated school personnel. Availability of appropriate supplies.
Hematocrit [HCT]	School Registered Nurse	Yes	Not to be delegated.	Availability of appropriate equipment and supplies.

HEALTH CARE NEEDS	SCHOOL PERSONNEL	TRAINING NEEDS	CIRCUMSTANCES WHICH REQUIRE SCHOOL RN ACTION	REMARKS
21. Specimen Testing (cont.)				
Blood Glucose (glucometer)	School Registered Nurse or to be determined with the student's physician.	Yes	Questionable results	If student is taught to self-test, monitoring will be done by designated school personnel. Availability of appropriate supplies.
22. Care of Equipment	All school personnel using equipment	Yes	Evidence of malfunctioning.	Follow recommendations of manufacturer, current nursing procedures and home care provider.
23. Charting	School personnel providing care	Yes	Charting on the individual cumulative health records to be done by school registered nurse or designee.	Recording forms may be set up by school registered nurse for school personnel to check off when care is given. School nurse always keeps progress notes of care given.

If another type of specialized health care is required by a student in the school setting, the student/family, student's physician and the school staff will jointly determine who can best provide this care.

CRITERIA AND COMPETENCIES OF PERSONS PROVIDING HEALTH SERVICES IN SCHOOLS

In exploring the provision of health-related services in schools, it is necessary to outline the competencies of the individual providing the care. This is necessary not only from a legal, but also from an ethical standpoint. The following provides a summary of these competencies.

I. SCHOOL REGISTERED NURSE

A. The school nurse must have a current license as a registered nurse in the State of Colorado.

B. The school registered nurse should have a Type E teaching certificate from the Colorado Department of Education.

C. Performance of professional nursing services means the performance of both independent nursing functions and delegated medical and dental functions which require specialized knowledge, judgement and skill and as governed by license in the State of Colorado.

D. Special competencies of the school registered nurse include, but are not limited to, the ability, knowledge and skill to perform the following activities:

1. ASSESSMENT
   a. Obtain health information from health care provider(s).
   b. Determine the depth to which the health assessment is required for each individual student.
   c. Use physical assessment skills in determining the current health status of the student.
   d. Interpret health history information, medical reports, nursing observations and test result.
   e. Determine the importance of health information and its impact on the education process.
   f. Make specific recommendations.

2. PLANNING
   a. Develop a school health care plan to meet the student's individual health needs in the school setting.
   b. Collaborate with school personnel, student, parents and primary health care provider to develop this plan.

3. IMPLEMENTATION AND EVALUATION
    a. Manage the health care plan for the student's special health needs in the school setting.
    b. Provide direct health care services for the student when appropriate.
    c. Develop procedures and provide training for carrying out the services to meet the health needs.
    d. Monitor the health care services provided by other school personnel.
    e. Make recommendations to modify the school program to meet the student's health needs.
    f. Provide health consultation/health education/health promotion to the student and the family.
    g. Act as a liaison between school, community health care providers, parent and student.
    h. Evaluate the health care plan and set new goals and objectives to meet the student's current needs.

II. OTHER SCHOOL PERSONNEL PROVIDING HEALTH RELATED SERVICES IN SCHOOL SETTINGS

A. All medical contacts, referrals and interpretation of medical data must be coordinated by a school registered nurse.

B. Colorado Department of Education certified professionals should follow the standards of their profession in relation to the health care plan.

C. Non-certified school personnel are identified as those functioning under the direction of the principal with consultation from the school registered nurse.

1. Non-certified school personnel must have a current American Red Cross First Aid Certificate or equivalent.

2. Special competencies of these individual include but are not limited to:
    a. Accesses training as determined by the individual school district.
    b. Is dependable and reliable in working within the confines of guidelines and health care plans.
    c. Uses discretion and respects confidentiality of information.
    d. Exercises good judgement and requests additional assistance as necessary.
    e. Provides designated direct health care services within the individual's ability and training for the students as identified in the health care plan and monitored by the school registered nurse.

HANDWASHING

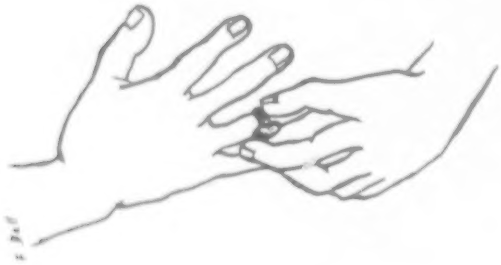
Definition: Cleansing the hands by the action of soap, water and friction.

Purpose: To reduce the number of disease causing organisms on the hands; to prevent the spread of infectious disease.

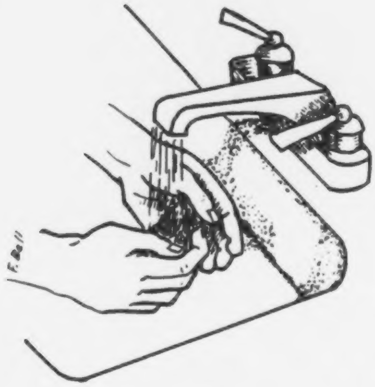
Equipment: Sink with hot and cold running water, liquid soap in a dispenser, brush or orangewood stick, paper towels, lotion, plastic lined waste container.

PROCEDURE

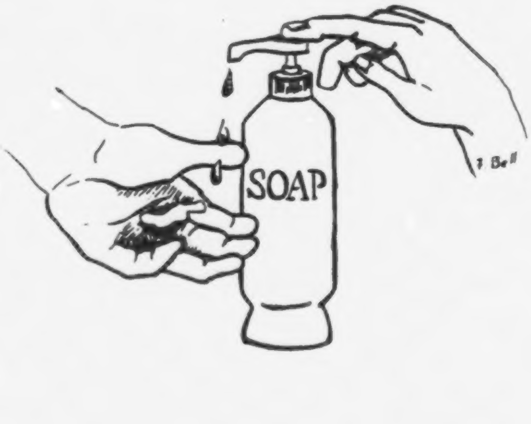
Steps	Notes
Handwashing should be done by everyone, including the student, before and after any physical contact with the student, before and after wearing disposable gloves, before and after handling procedural equipment, before eating, after handling any bodily fluids, before and after going to the bathroom.	Review physician's orders and student's health care action plan for any special precautions. Refer to Appendix C: Handling Body Fluids.
Gather the needed equipment at the sink.	If running water is not available, bring water in a large pitcher or similar container and have a basin or pail to receive waste water.
Remove your jewelry.	Stones, settings, links, etc. can harbor micro-organisms.



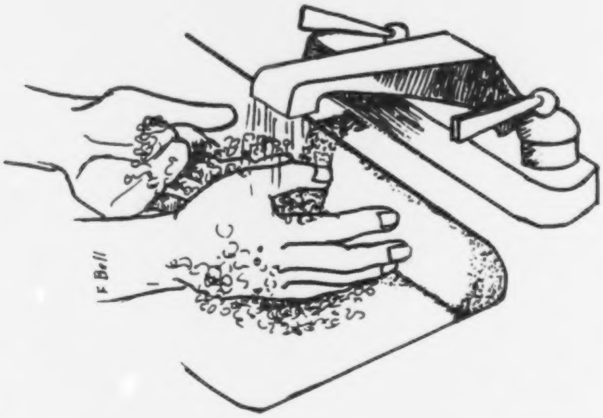
Steps	Notes
Turn on the water.	Leave the water running until handwashing is complete.
Select a warm water temperature.	Hot water removes protective oils and will dry the skin. Cold water is better than none, as the friction is important.
Wet your hands.	

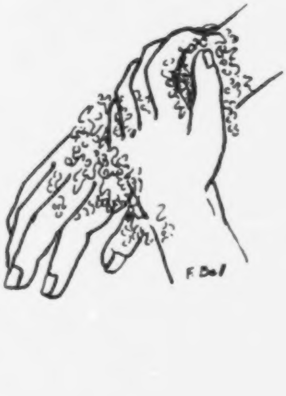


Steps	Notes
Pump liquid soap from the dispenser on to one hand; begin to make a lather over your hands and wrists.	Bar soap and soap dishes can provide a media for bacterial growth.

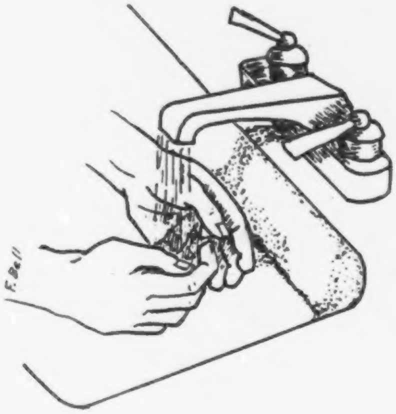


Steps	Notes
Wash all surfaces of your hands and fingers; wash at least 2 inches above your wrist.	Keep your fingertips pointed downward and your hands lower than your elbows to prevent micro-organisms from contaminating your arms by backflow.
Add water as needed.	To keep a good lather.
Get soap under your nails, into the knuckle folds, between your fingers.	Places where dirt and micro-organisms accumulate.
Use a nail brush or orangewood stick to gently, but thoroughly clean your nails.	Use the folded edge of a paper towel to clean under your nails if nothing else is available.
Use a rotating motion and friction as you wash.	Rub one hand against the other; interlace your fingers and thumb, and rub up and down; rub the tips of your fingers against your palms to clean around the nailbeds; rub your wrist and an area 2 inches above with a twisting motion, then repeat with your other wrist.

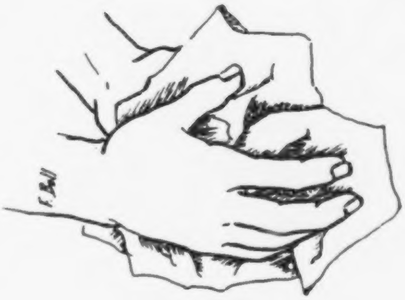


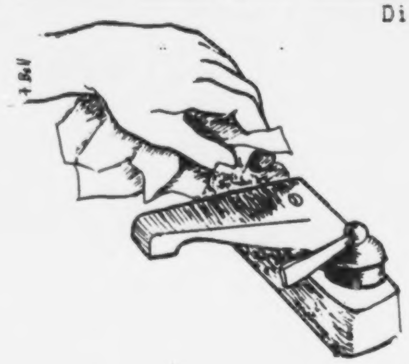
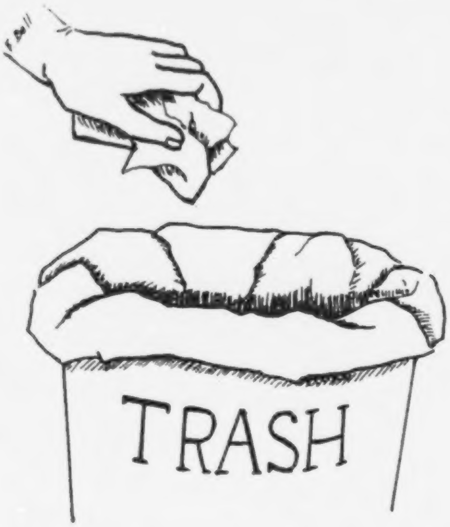


Steps	Notes
Rinse thoroughly with running water.	Hold your fingertips downward and have your hands lower than your elbows. Rinse from the area 2 inches above your wrists to your fingertips. Running water carries away dirt, soap and micro-organisms.



Use a paper towel to wipe the surfaces around the sink.	Clean and dry surfaces deter the growth of micro-organisms.
Discard the paper towel into the waste container.	Avoid touching the container.
Dry your hands gently and thoroughly with paper towels.	Dry from the hands to the forearms: from the clean to the dirty. Skin that is properly dried is less likely to chap and split.



Steps	Notes
Use a paper towel to turn off the water.	Discard it. 
Discard used paper towels into waste container.  	Avoid touching the container.
Apply lotion as desired.	Keeps skin soft and more resistent to bacteria.
Document washing your hands, or washing the student's hands, on the student's health record or treatment log.	Routine recording of routine handwashing is not necessary. In special circumstances it may be necessary to record the handwashing procedure.
end	end

REFERENCES for APPENDIX B. HANDWASHING:

American National Red Cross. Family Health and Home Nursing. Garden City, NY: Doubleday & Company, Inc., 1979.

Florida Department of Health and Rehabilitative Services. School Health Nursing Services For Medically Complex Children. HRS Pamphlet 150-7. Tallahassee: Florida Department of Health, 1987.

King, Eunice M., Lynn Wieck, and Marilyn Dyer. Illustrated Manual of Nursing Techniques. Philadelphia: J. B. Lippincott Company, 1977.

Schuster, Cindy. "Hand Washing Techniques." Managing The Student With a Chronic Health Condition: A Practical Guide For School Personnel. Minneapolis: PATHFINDER and the School Nurse Organization of Minnesota, 1986.

Zucker, Elana D., ed. Being A Homemaker/Home Health Aide. Bowie, MD: Robert J. Brady Co., Prentice-Hall Publishing, 1982.

HANDLING BODY FLUIDS

Definition: Body Fluids include blood, wound drainage, urine, vomitus, stool, tears, saliva, semen, vaginal secretions, mucus, and respiratory secretions including nasal discharge and sputum; Handling means dealing with, acting on, or disposing of a substance or issue.

Purpose: To decrease the risk of direct transmission of disease; to minimize the risk of indirect transmission of disease resulting from contamination of the physical environment and equipment by body fluids.

Equipment: Soap, running water, paper towels, disposable gloves, disposable plastic bags, plastic lined and covered waste containers, dust pans, buckets, mops, appropriate disinfectants.

Steps	Notes
Work with school administration to: a) Make handwashing the foundation of the disease prevention program.	Handwashing is the single most effective procedure to prevent the spread of communicable diseases.
b) Select and purchase appropriate disposable gloves.	Gloves must be able to hold air or water to be acceptable.
c) Select appropriate disinfectants such as-- Ethyl or isopropyl alcohol (70%) Phenolic germicidal detergent in a 1% aqueous solution (Lysol is an example)	Appropriate disinfectants are those registered with the U.S. Environmental Protection Agency (EPA) as "hospital disinfectants" and are tuberculocidal when used at recommended dilutions.
Sodium hypochlorite solution 1:10 (household bleach mixed with water such as 1½ cups of bleach to 1 gallon of water) that is **PREPARED DAILY**.*	Follow disinfectant manufacturer's directions for proper use, preparation and storage.
Quaternary ammonium germicidal detergent in 2% aqueous solution (Tri-quat, Mytar and Sage are examples)	
Iodophor germicidal detergent with 500 ppm available iodine (Wescodyne is an example).	Brand names used here are examples only, not endorsements of these products.
* "Recommendations for Prevention of HIV Transmission in Health-Care Settings", page 10S in Centers for Disease Control's Morbidity and Mortality Weekly Report, Supplement of August 21, 1987.	Precautions for use of 1:10 hypochlorite solution: Avoid skin contact--wear gloves; Repeated use will corrode metal; It will discolor materials such as rugs and clothing.

Steps	Notes
d) Develop and implement protocols for handwashing, using disposable gloves, and cleaning/disinfecting items contaminated with body fluids.	Refer to Appendix B. Handwashing. See protocols that follow. No distinction should be made between body fluids from individuals with a known disease or individuals without symptoms or with an undiagnosed disease.
e) Educate the school staff about the potential danger of infection from body fluids.	Refer to "Body Fluid Source of Infectious Agents" later in this Appendix.
f) Determine the need for any additional precautions to prevent the spread of disease at school.	Review the latest recommendations from the Center For Disease Control, Colorado Department of Health and local health departments.
g) Decide the risk the school (a group situation) may present to an individual student who is highly susceptible to infection.	Work with the student's physician to make this determination.
h) Specify appropriate protocols for each student in his health care action plan.	Discuss these with the physician and family while formulating the plan; see Chapter 23. Charting.
i) Ensure that all restrooms and classrooms meet environmental standards for schools (e.g., have soap available).	Refer to Standards and Regulations for Schools, section 10.13, adopted by the Colorado Board of Health, January 1977.
==end==	==end==

GUIDELINES FOR USING DISPOSABLE GLOVES WHEN HANDLING BODY FLUIDS AT SCHOOL

Wash your hands before using disposable gloves.

Wear disposable gloves if you have an open sore or cut on your hands and you will be handling any body fluids.

Wear gloves whenever you will be--

"...touching blood and body fluids, mucous membranes or non-intact skin (of students), for handling items or surfaces soiled with blood or body fluids, or for performing venipuncture or other vascular access procedures." (MMWR Supplement, August 21, 1987, page 6S).

Wear gloves when you clean up a spill of blood or body fluids.

Guidelines For Using Disposable Gloves (cont.):

To remove your gloves: a) grasp the cuff of one glove; b) strip the glove off by turning it inside out; c) repeat with second glove.
Remove gloves after each procedure and after caring for a single student. Discard them into a plastic lined waste container.
Wash your hands thoroughly.

BODY FLUIDS AS SOURCE OF INFECTIOUS AGENTS
TRANSMISSION CONCERNS AT SCHOOL

BODY FLUID--SOURCE	ORGANISM OF CONCERN	TRANSMISSION CONCERN
Blood --cuts/abrasions --nosebleeds --menses --blood sample by finger stick --contaminated needle	Hepatitis B virus AIDS virus Cytomegalovirus	Blood stream inoculation through cut and abrasions on hands Direct blood stream inoculation
*Feces --incontinence --stool specimen	Salmonella bacteria Shigella bacteria Rotavirus Hepatitis A virus	Oral inoculation from contaminated hands
*Urine --incontinence --urine specimen	Cytomegalovirus	Bloodstream, oral and mucus membrane inoculation from hands
*Respiratory Secretions --saliva --nasal discharge --sputum specimen	Mononucleosis virus Common cold virus Influenza virus	Oral inoculation from contaminated hands
	Hepatitis B virus	Bloodstream inoculation through bites
*Vomitus	Gastrointestinal viruses, e.g., Norwalk agent Rotavirus	Oral inoculation from contaminated hands
Semen	Hepatitis B virus AIDS virus Gonorrhea	Sexual contact (intercourse)

*Possible transmission of AIDS virus is currently thought to be of little concern from these sources.

PROTOCOLS FOR HANDLING BODY FLUIDS AT SCHOOL

"All school district personnel should be advised of routine procedures to follow in handling body fluids. These procedures should provide simple and effective precautions against transmission of diseases to persons potentially exposed to the blood or body fluids of another. These procedures should be standard health and safety practices. No distinction should be made between body fluids from individuals with a known disease or individuals without symptoms or with an undiagnosed disease." (Colorado Association of School Boards. "Guidelines For Handling Body Fluids In Schools." Colorado Demonstration Policy Manual, 1987).

GUIDELINES FOR CLEANING / DISINFECTING ITEMS CONTAMINATED BY BODY FLUIDS IN THE SCHOOL SETTING

Blood and body fluid spills should be cleaned up promptly. Use disposable items to handle body fluids whenever possible. Wash with soap and water then disinfect.

> "Disinfectant-detergent formulations registered by EPA can be used for cleaning environmental surfaces, but the actual physical removal of microorganisms by scrubbing is probably at least as important as any antimicrobial effect of the cleaning agent used." (MMWR Supplement, August 21, 1987, page 11S.)

FOR WASHABLE SURFACES (HARD SURFACES)

For desks, tables, etc.:

Put on disposable gloves.

Remove all visible material using a disposable cleaning cloth (paper towel, Handiwipe, etc.) with soap and water or other school approved cleaning agent.

Rinse the surface to remove the soap.

Disinfect using recommended agent in proper dilution, such as 70% isopropyl alcohol, Lysol, or household bleach mixed 1:10 with water and prepared daily (see page 291, c)).

Rinse with water if directed by disinfectant manufacturer's directions.

Allow to air dry.

Discard disposable cleaning supplies into covered plastic lined waste container that will be secured and double bagged at the end of the day.

Remove and discard your gloves in a covered plastic lined waste container. Wash your hands. Refer to Appendix B. Handwashing.

For floors:

Put on disposable gloves.

Soak up and remove large spill with school approved absorbing agent and/or paper towels.

Wash, rinse and disinfect using the two bucket system (one bucket to wash the soiled surface and one bucket to rinse)--

a) In bucket #1, dip, wring, mop up the vomitus, blood, or other body fluid until the area is clean.
b) Dip, wring and mop once more.
c) Dip, wring out mop in bucket #1.
d) Put mop into bucket #2 (rinse bucket) that has clean disinfectant (such as Lysol, bleach solution, etc.; see page 291, c)).
e) Mop or rinse the area.
f) Return mop to bucket #1 to wring out. This keeps the rinse bucket clean until the procedure is complete.
g) After the spill is cleaned up, take care of your equipment:

    1) Soak the mop in disinfectant after use.
    2) Dispose of contaminated cleaning and disinfectant solutions into the toilet or sewer drain.
    3) Discard disposable cleaning supplies into covered plastic lined waste container that will be secured and double bagged at the end of the day.
    4) Clean non-disposable equipment (dust pans, buckets, etc.), then rinse in disinfectant.
    5) Remove and discard your gloves in a covered plastic lined waste container.
    6) Wash your hands. Refer to Appendix B. Handwashing.

FOR NON-WASHABLE SURFACES (SOFT SURFACES)
such as rugs and upholstery

Put on disposable gloves.

Apply sanitary absorbing agent, let dry, vacuum.

Use broom and dustpan to remove solid materials, if necessary.

Apply rug or upholstery shampoo as directed by the manufacturer. Revacuum according to directions on shampoo.

When using a sanitizing carpet cleaner method (water extraction) follow directions on label.

Discard contents of vacuum cleaner into covered plastic lined waste container.

Clean dustpan and broom, if used. Rinse in disinfectant solution.

Air dry.

Remove and discard your gloves.

Wash your hands. Refer to Appendix B. Handwashing.

FOR SOILED WASHABLE MATERIALS
(clothing, towels, etc.)

Handle the item as little as possible.
Wearing gloves, rinse it under running water if appropriate.
Place the item in a plastic bag. Seal the bag until the item can be washed. Send soiled clothing home with the student in a sealed plastic bag.
Clean the sink, if needed.
Wipe the sink with paper towels; discard the towels in plastic lined waste container.
Remove and discard your gloves. Wash your hands.

Wash soiled items separate from other items, washing and drying as usual.
If the material is bleachable, add 1/2 cup bleach to the wash cycle; otherwise add 1/2 cup non-chlorine bleach to wash cycle. Use water temperature appropriate to the material.
Discard the plastic bag used to store the item into a plastic lined waste container or another clean sealed plastic bag.
Remove and discard your gloves. Wash your hands.

GUIDELINES FOR THE SCHOOL BUS DRIVER FOR HANDLING BODY FLUIDS ON THE SCHOOL BUS

Use the materials and instructions in the body fluid clean up kit provided by the school district. Items to be found in the kit are underlined.

Put on disposable gloves.
Use paper towels to pick up or soak up the body fluids.
Discard the soiled paper towels and body fluid material into a plastic bag.
Use alcohol to clean the area either by pouring the alcohol on the area or moistening paper towels with the alcohol and applying to the area.
Discard paper towels, gloves and any other materials into the plastic bag.
Wash your hands with some of the alcohol and dry with a paper towel, again discarding the towels into the plastic bag.
Tie the plastic bag shut.
Discard the tied plastic bag into a covered plastic lined waste container when you reach your destination.
Notify school staff of the incident. When incident occurs on the ride home with the student, notify the parent if possible.
Replace the items used from the body fluid clean up kit.

REFERENCES for Appendix C. HANDLING BODY FLUIDS:

Brainerd, Elaine, James Hadler and Patricia Checko. "Guidelines for Handling Body Fluids in Schools." Managing The Student With A Chronic Health Condition: A Practical Guide For School Personnel. Minneapolis: PATHFINDER and the School Nurse Organization of Minnesota, 1986.

California State Department of Education. Techniques For Preventing The Spread Of Infectious Diseases, Section III. Sacramento: California State Department of Education, 1986.

Colorado Association of School Boards. "Guidelines For Handling Body Fluids In Schools." Colorado Demonstration Policy Manual. Denver: Colorado Association of School Boards, 1987.

Colorado Department of Health Community Nursing Section. MEMORANDUM: Recommended Guidelines for Blood/Body Fluid Borne Disease Precautions. Denver: Colorado Department of Health, January 6, 1988.

Centers For Disease Control. "Recommendations for Prevention of HIV Transmission in Health-Care Settings." Morbidity and Mortality Weekly Report, Supplement. Atlanta: U.S.Department of Health and Human Services, Public Health Service, Centers for Disease Control, August 21, 1987.

Delaware Department of Public Instruction. "Handling Body Fluids." AIDS Policies and Instructional Materials. Dover: Delaware Department of Public Instruction, 1988.

Illinois State Board of Education and Illinois Department of Public Health. Management of Chronic Infectious Diseases in School Children. Springfield: Illinois Department of Public Health, September 1986.

National Association of School Nurses. AIDS Document. Englewood, CO: National Association of School Nurses, 1987.

Florida Department of Health and Rehabilitative Services. School Health Nursing Services For Medically Complex Children, HRS Pamphlet 150-7. Tallahassee: Florida Department of Health, 1987.

Standards and Regulations for Schools. Authorized by Sections 25-1-107(1)(m), 25-1-108(1)(c)(I) and 25-5-508; CRS 1973. Adopted by Colorado Board of Health, January 1977.